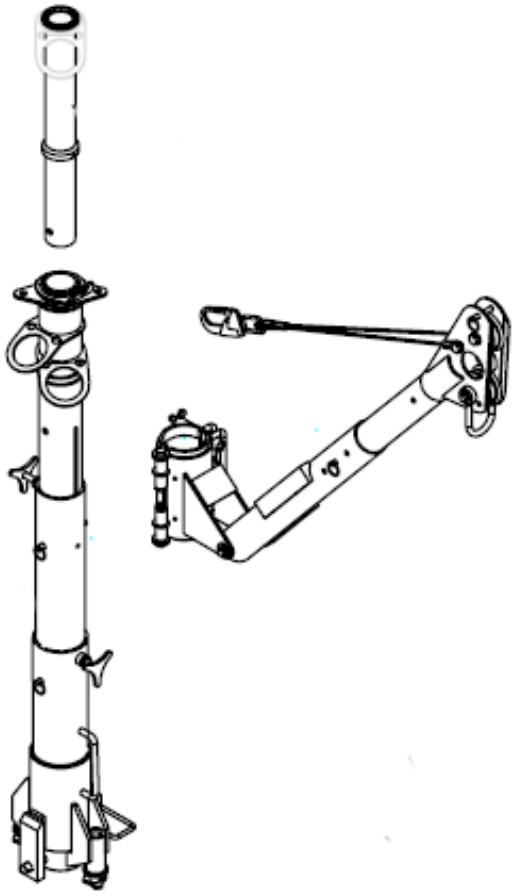
MILLER™ DuraHoist

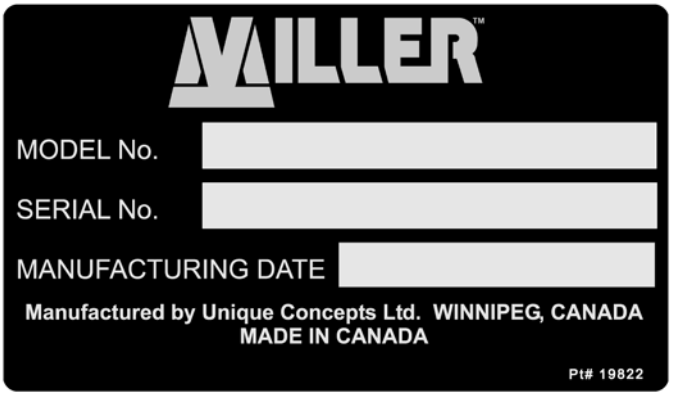


MAN RATED
CONFINED SPACE
ENTRY/RETRIEVAL SYSTEMS
PORTABLE FALL-ARREST SYSTEM
OPERATOR'S MANUAL

SERIAL NUMBER LOCATION

Always give your dealer or distributor the serial number of your MILLER DURAHOIST Portable Fall-Arrest System when ordering parts or requesting service or other information.

The serial number plate is located where indicated. Please mark the number in the space provided for easy reference.



SERIAL NUMBER LABEL

Model_____

Serial Number_____

Congratulations on your purchase of a MILLER DURAHOIST Portable Fall Arrest System. This equipment has been designed and manufactured to meet the needs of a discriminating operator in the variety of fall-arrest, confined space entry/retrieval and rescue situations.

Safe, efficient and trouble free operation and maintenance of your equipment requires that you or anyone else who will be operating, maintaining or inspecting the equipment, read, understand and follow all the Safety, Operation, Maintenance and Inspection instructions contained in this manual, and in any related manuals referenced in this manual and/or supplied with the system.

This manual covers the **MILLER DURAHOIST PORTABLE FALL-ARREST SYSTEM** and Accessories manufactured for MILLER. Use the Table of Contents or Index as a guide when searching for specific information.

WARNING
This product is a part of a Man Rated Confined Space Entry/Retrieval System. The user must read, understand, and follow the instructions contained in the manual for each component or total system before using this equipment. Establish an appropriate training, maintenance, and inspection program for your people and the equipment. Failure to follow these instructions could result in serious injury or death.

Keep this manual handy for frequent reference and to pass to new operators. Establish a regular training program for experienced and new operators per these instructions. Establish a regular maintenance and inspection program to keep the equipment in top condition.

The **MILLER DURAHOIST PORTABLE FALL-ARREST SYSTEM** is a modular system of Portable Fall Arrest Anchor Posts, Extensions, and Support Bases designed to address a wide variety of Fall-Arrest and Confined Space Entry/Retrieval and Rescue applications.

Modular components are labelled with the capacities and rating to which they were designed, tested, and manufactured. The rating of any system is considered to be the rating of the lowest rated component contained is the system.

Do not use the equipment if rating labels are damaged or illegible. New labels are available from Miller or your local authorized dealer. When ordering replacement labels, be sure to include:

1) The part number from the bottom right hand corner of the label, when available.
2) The serial number of the unit.
3) The part (item) number of the component (consult the appropriate section of this manual).
4) Any other numbers stamped on the components.

SAFETY ALERT SYMBOL

This Safety Alert symbol means
ATTENTION! BECOME ALERT!
YOUR SAFETY IS INVOLVED!

The Safety Alert symbol identifies important safety messages on your MILLER Equipment and in the manual. When you see this symbol, be alert to the possibility of personal injury of death. Follow the instructions in the safety message.

Why is SAFETY important to you?

3 Big Reasons

Accidents Disable and Kill
Accidents Cost You Money
Accidents Can Be Avoided

SIGNAL WORDS:

Note the use of the signal words **DANGER, WARNING,** and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using he following guide-lines:

DANGER - Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations, or for hidden or unseen hazards.

WARNING - Indicates a potentially hazardous situation that if not avoided, could result in death or serious injury, and includes obvious and hidden hazards. It may also be used to alert against unsafe practices.

CAUTION - Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

SAFETY

YOU are responsible of the **SAFE** operation, maintenance and inspection of your MILLER DURAHOIST Portable Fall-Arrest System. **YOU** must ensure that you and anyone else, who is going to operate, maintain, inspect or work around the equipment
be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety and operating practices while using the equipment.

Remember, **YOU** are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the procedures recommended and follows safety precautions. Remember, most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- Owners must give operating instructions to operators or employees before allowing them to use the equipment, and at least annually thereafter.

- The most important safety device on this equipment is a **SAFE** operator. It is the operator's responsibility to read and understand **ALL** Safety and Operating instructions in the manual and to follow these. All accidents can be avoided.

- A person who has not read, been trained in using and understood all operating and safety instructions is not qualified to operate this equipment. An untrained operator exposes himself and others to possible serious injury or death.

- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.

- Think SAFETY! Work SAFELY!

2.1 GENERAL SAFETY

1. Read, understand and follow the User Manual and all safety signs before using, maintaining or inspecting the equipment.

2. Refer to and follow applicable **ANSI, OSHA, CE** or other Standards and local regulations. Comply with requirements of local regulations for your applications.

3. Establish an equipment–use training program for experienced employees. Only trained, competent persons shall use the equipment. An untrained operator is not qualified to operate the system.

4. Have a first-aid kit available for use should the need arise and know how to use it.

5. Provide a fire extinguisher for use in case of an accident. Store in a highly visible place.

6. Install and properly secure all guards and shields before operating.

7. Wear appropriate protective gear. This list includes but is not limited to:

   - A hard hat
   - Safety glasses
   - Protective shoes with slip resistant soles
   - Heavy gloves
   - Protective clothing
   - Face protection

8. Review and follow the Pre-Operation Inspection before using a component in the system or the system itself.

9. Establish a regular Maintenance and Inspection program with your equipment and maintain detailed records.

10. Review safety related items and operating instructions with all personal on a regular basis.

11. Be aware of your environmental surroundings, be sure not to use the equipment during an electrical storm. (this equipment is conductive)

12. When using our winch with our equipment, the noise level does not exceed 70 dB(A).

2.2 OPERATING SAFETY

1. Read, understand and follow the User Manual and signs on the equipment before using, maintaining or inspecting the equipment.

2. Train all operators before allowing them to use the equipment. An untrained operator exposes themselves, bystanders and co-workers to possible serious injury or death.

3. Visually inspect the equipment and all auxiliary components and equipment before using. Correct any problems before using the equipment.

4. Securely anchor all winches and /or SRL's before using, where applicable.

5. Use only certified anchor and connector components in your system.

6. Use only an approved full body harness for the workers.

7. Always work in teams. One person works in the confined space and the other one pays out the line and reels it in.

8. Do not use the winch when the brake wear indicator displays excessive wear, the overload indicator on the snap has been activated, or Miller's service interval has been exceeded. Return winch to manufacturer for service. (Refer to the appropriate Winch Operators Manual for detailed information on winch operation.)

9. Do not exceed the winch's rated working load during operation.

10. Establish a regular training program for new and experienced workers.

11. Establish a detailed inspection program for your equipment and document the findings. Return the equipment to Miller for rework if any problems are found.

12. Plan your work program before starting. Have the required people, equipment and procedures available to do the job.

13. Do not use the equipment around physical or environmental hazards. This list includes but is not limited to:
    a. Corrosion that may affect the structural integrity of the life line or other components .
    b. Chemicals which can degrade components and not be visible.
    c. Toxic gases: Rescuers or workers can be killed in toxic environments.
    d. Heat or elevated temperatures.
    e. Moving machinery: Workers or auxiliary equipment can be contacted by or pulled into moving components.
    f. Sharp edges: Workers or the equipment can be injured or damaged by sharp edges or components.
    g. Electrical hazards: Stay away from power lines or components carrying electrical power.
    h. Overload: Do not exceed rated working load limit during operation.
    i. Follow confined space regulations in Standards.

2.3 MAINTAINANCE/INSPECTION SAFETY

1. Read, understand and follow the User Manual and signs on the equipment before using, maintaining or inspecting the equipment.

2. **ANSI, OSHA & CE** require a regular inspection program for all Confined Space Entry/Retrieval Equipment and to maintain documented results of these inspections. Follow the inspection procedure contained in this manual and use the inspection form to document the results.

3. Keep instructional and safety signs clean and legible at all times. Clean or replace as required.

4. Lubricate winch as per instructions in the appropriate Winch Operators Manual.

5. Remove the equipment from service if a problem is found during the inspection. Return to an authorized repair depot or the factory for service.

3 OPERATING, NEW OPERATOR OR OWNERS

The **MILLER DURAHOIST PORTABLE FALL-ARREST SYSTEM** is designed to attach to a person working at a height to provide protection against injuries resulting from a fall. Various accessories address a variety of fall-arrest requirements, as well as confined space entry/retrieval and rescue needs. Every new operator must read, understand and follow the instructions in all applicable manuals. No one should be allowed to use the equipment without training. The training should be reviewed with experienced operators on a regular basis. At regular intervals perform a detailed inspection of the equipment and document the results. Remove from service if deficiencies are found. Alterations or misuse of this equipment or failure to follow instructions, may result in serious injury of death.

It is the responsibility of the owner's organization or operator to read this manual and to train all other operators before they start working with the equipment. Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the work site. Untrained operators are not qualified to operate the equipment.

Many features incorporated into this equipment are the result of suggestions made by customers like you. Read this manual carefully to learn how to operate the equipment safely and how to set it to perform as intended. By following the operating instructions in conjunction with a good maintenance program, your equipment will provide many years of trouble-free service.

OPERATING SAFETY

1. Read, understand and follow the User Manual and signs on the equipment before using, maintaining or inspecting the equipment.

2. Train all operators before allowing them to use the equipment. An untrained operator exposes themselves, bystanders and workers to possible serious injury or death.

3. Visually inspect the equipment and all auxiliary components and equipment before using. Correct any problems before using the equipment.

4. Securely anchor the winch before using.

5. Use only certified anchor and connector components in your system.

6. All anchor points, or mounting/setup locations for permanent or portable systems must be approved to local standards by a qualified engineer.

7. Use only an approved body harness for the workers.

8. Always work in teams. One person works in the confined space and the other one pays out the line and reels it in.

9. Do not use the winch when the brake wear indicator displays excessive wear, the overload indicator on the snap has been activated, or Miller's service interval has been exceeded. Return winch to manufacturer for service. (Refer to the appropriate Winch Operators Manual for detailed information on winch operation.)

10. Use only retractable lifelines or shock absorbers with a maximum arrest force (MAF) rating equal to or lower than ½ of the strength of the lowest rated component of your system.

11. Establish a regular training program for new and experienced workers.

12. Establish a detailed inspection program for your equipment and document the findings. Return the equipment to Miller for rework if any problems are found.

13. Plan your work program before starting. Have the required people, equipment and procedures available to do the job.

14. Do not use the equipment around physical or environmental hazards. This list includes but is not limited to:
    a. Corrosion that may affect the structural integrity of the life line or other components.
    b. Chemicals which can degrade components and not be visible.
    c. Toxic gases: Rescuers or workers can be killed in toxic environments.
    d. Heat or elevated temperatures.
    e. Moving machinery: Workers or auxiliary equipment can be contacted by or pulled into moving components.
    f. Sharp edges: Workers or the rescue equipment can be injured by or damaged by sharp edges or components.
    g. Electrical hazards: Stay away from power lines or components carrying electrical power.
    h. Overload: Do not exceed rated working load limit during operation.
    i. Follow confined space regulations in Standards.
    j. Noise: wear appropriate noise protection where necessary.
    k. Environmental hazards: do not operate equipment during electrical storms.

3.1 PORTABLE FALL ARREST POST

3.1.1 General

The **MILLER DURAHOIST PORTABLE FALL-ARREST POST** is a modular unit consisting of a 3 section tubular body, constructed of welded aluminum, featuring:

1. A head assembly equipped with 3 independent swivel tie-off rings.

2. Various accessories to address different situations.

3. Adjusting screws for vertical leveling of the Fall-Arrest Post when installed on inclined surfaces.

4. Featuring adjustable height option from 33.0 (840mm) to 57.5 (1460mm) inches.

Figure 3.1.1

WARNING
This mast is to maintain a vertical position at all times it is being used as a fall-arrest anchor point.
Part #: 16994

WARNING

The Davit Arm Assembly and Anchor Post Extension have some application restrictions when used in different types of applications. Use of Portable Fall-Arrest System Accessories may affect the rating of the Portable Fall-Arrest System Anchor Post in various situations. The rating of any system is the rating of the lowest rated component in that system.

When using a **MILLER DURAHOIST PORTABLE FALL-ARREST SYSTEM** the rating of any
particular system is defined as the rating of the lowest rated component in the system. Check the rating label on each system component before using to ensure that the rating meets all applicable regulatory requirements.

Do not use any equipment on which any of the warning, rating or other labels have been removed, become damaged, or are otherwise illegible. Refer to Section 5 of this manual "Labels", or to the appropriate section of the applicable system manual for information on ordering replacement labels.

3.1.2 Setting Up the Portable Fall Arrest Post

The **MILLER DURAHOIST PORTABLE FALL-ARREST SYSTEM POST** is designed for use with a variety of portable and permanent mount support bases. Consult the appropriate section of this manual or separate manuals when setting up or installing any MILLER Portable Fall Arrest Bases.

Step 1: Before setting up for any work at heights, fall arrest, or confined space entry be sure that you have all equipment required to safely carry out the work to be performed, and to meet all applicable standards and regulations for your area.

Step 2: Set-up or locate the Portable Fall Arrest System Base intended for use in the application according to the instructions in the applicable section of this manual. Ensure that the base is structurally sound and free of any corrosion or contamination which may affect the insertion of the connecting pin or the structural integrity of the base.

Regulations governing Fall Protection, Confined-Space Entry/ Retrieval and Rescue Procedures vary with jurisdiction. It is the responsibility of the owner and/or user of this equipment to be aware of applicable regulations and ensure that equipment selected for each job complies with these requirements.

Refer to the appropriate section of this or any other applicable manuals for specific information on the installation and use of the type of base you are using prior to using the system.

Step 3: As shown in Fig. 3.1.3, insert the Portable Fall Arrest Post (13) between the base plates tabs (1) and visually align the ¾" holes as shown in Fig. 3.1.3.B. Secure the Post by inserting the ¾" pin (2) through the base plate tabs (1) and sleeve (13). Make sure the pin fully engages both the base plate tabs (1) and the entire Post to lock the Post firmly in place.

Step 4: Extend the post (13) by loosening tri-screw (4a) and removing section 1 pin (5) from section 1, Figure 3.1.2 A, lift section 2 and align the pin holes, secure section 2 in section 1 by fully engaging section 1 pin (5). The post should look like Figure 3.1.2 B.

Loosen tri-screw (4b) and lift section 3 and align pin holes with section 2, Figure 3.1.2 B and secure the Post section 3 by using section 2 pin (6). The post should look like Figure 3.1.3 A.

Hand tighten both tri-screws (4).

Step 5: The Portable Fall-Arrest Post (Fig. 3.1.3A) must be in a vertical position at all times when it is being used as a Fall-Arrest anchor point. Depending on the type of base you are using the Post may be leveled by using the adjuster screws (3) the base plate (10) or a combination of these. The adjuster screws are alternately loosened and tightened to level the Post.

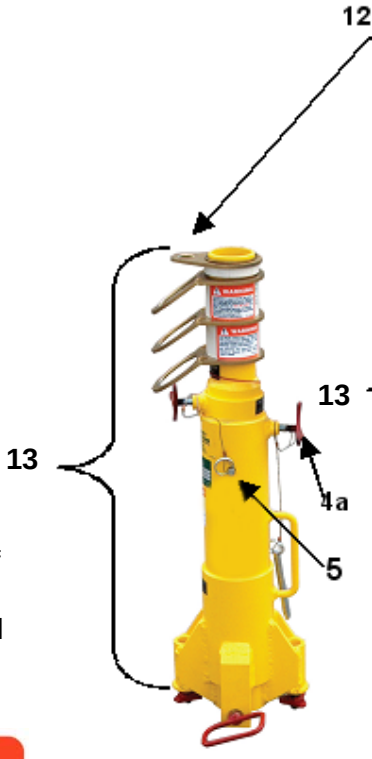


Figure 3.1.2 A

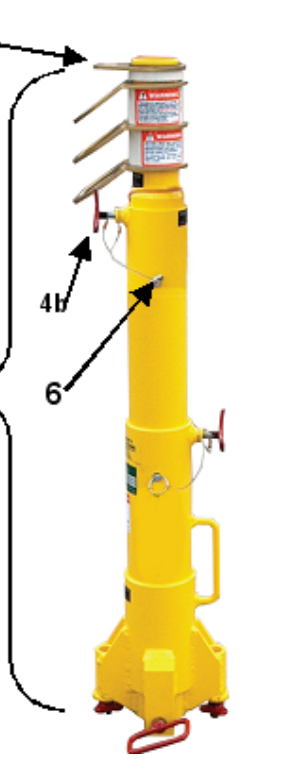


Figure 3.1.2 B

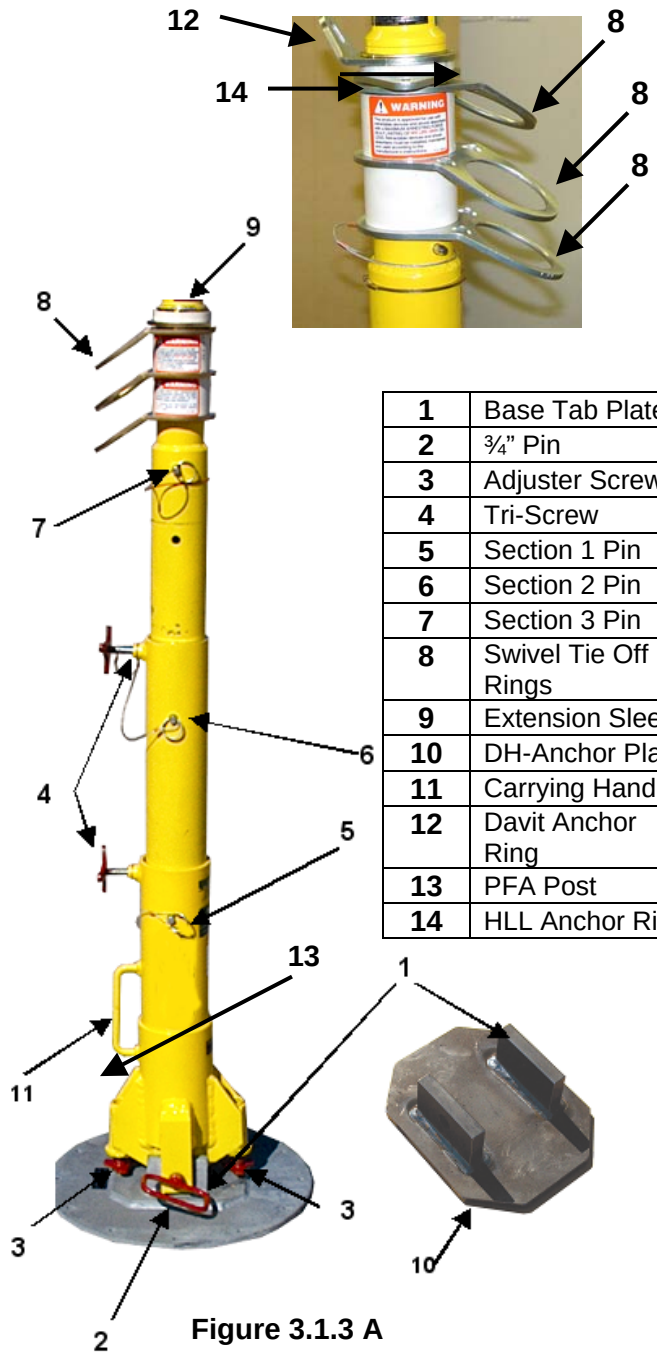
WARNING
This mast is to maintain a vertical position at all times it is being used as a fall-arrest anchor point.
Part #: 16994

Step 6: Install any accessories (eg. Anchor Post Extension) that installs in the sleeve (9) at the top of the Portable Fall Arrest Post. Refer to the applicable section of this or other applicable accessory manuals for any accessories being used with this system.

Step 7: Depending on the nature of the entry and the standards and regulations governing Confined Space Entry/ Retrieval and Rescue requirements in your area, a Personal Fall-Arrest System (PFAS) connected to the entrant may be required. It is the responsibility of the operator to be aware of these requirements and follow them. Always wear a full body harness when attached to a PFAS to minimize potential injury.

Step 8: Once the system is set-up inspect all components, fasteners, and other parts for wear, damage, corrosion, looseness, or any other condition that may reduce the integrity of the system. Components which are worn, damaged, corroded, or loose, must be tagged, marked with "**DO NOT USE**" or like wording and prevented from being used until repaired or replaced as required.

Step 9: Following all instructions contained in Miller's instructions for any PFAS or any other devices being used, the appropriate section of this manual or other manuals for any MILLER Accessories being used, and all applicable standards or regulations governing Fall Protection, Confined Space Entry/ Retrieval and Rescue for your area proceed with the work.



1	Base Tab Plates
2	¾" Pin
3	Adjuster Screw
4	Tri-Screw
5	Section 1 Pin
6	Section 2 Pin
7	Section 3 Pin
8	Swivel Tie Off Rings
9	Extension Sleeve
10	DH-Anchor Plate
11	Carrying Handle
12	Davit Anchor Ring
13	PFA Post
14	HLL Anchor Ring

Figure 3.1.3 A

Figure 3.1.3 B

3.1.3 Using the Portable Fall Arrest Mast for Horizontal Lifeline (HLL) Applications

3.1.3.1 General

The MILLER DURAHOIST Portable Fall Arrest Mast can be used for most temporary Horizontal Lifelines (HLL) applications, therefore using existing mounting bases as the temporary base for HLL applications.

3.1.3.2 Setting up the Portable Fall Arrest Post for HLL use

When using this post for HLL applications, it is critical to know when to use a tie-back and when not to use a tie-back to support the HLL loads. Refer to the chart Figure 3.1.6 to confirm what loads can be sustained by the MILLER Portable Fall Arrest Post unsupported by a tie-back.

Follow all labels carefully when setting up for HLL applications and refer to the chart when unsure of load ratings.

Step 1: Follow set-up instructions in section 3.1.2 of this manual.

Step 2: The post can be used without the installation of a tie-back as shown in Figure 3.1.4a. Refer to the "HLL Chart Positions & Ratings", Figure 3.1.6 for maximum ratings without the use of a tie-back.

Step 3: Using the mast with the second and/or third stage erected (Positions 4, 3 & 2) and HLL load ratings that exceed the load rating shown in the chart, Figure 3.1.6, must have tie-backs installed as shown in Figure 3.1.4b.

Step 4: Using the davit arm with a HLL requires the third section, (Positions 4 & 3) of the mast to be erected to install the davit arm sleeve. Refer to the chart to verify tie-back use.

Refer to section 3.3.3.1 of this manual for Davit Arm set-up.

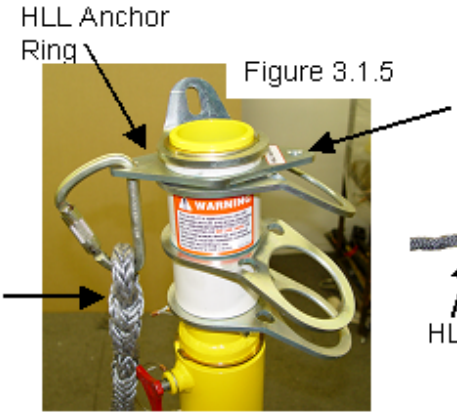


Figure 3.1.5

Figure 3.1.4a

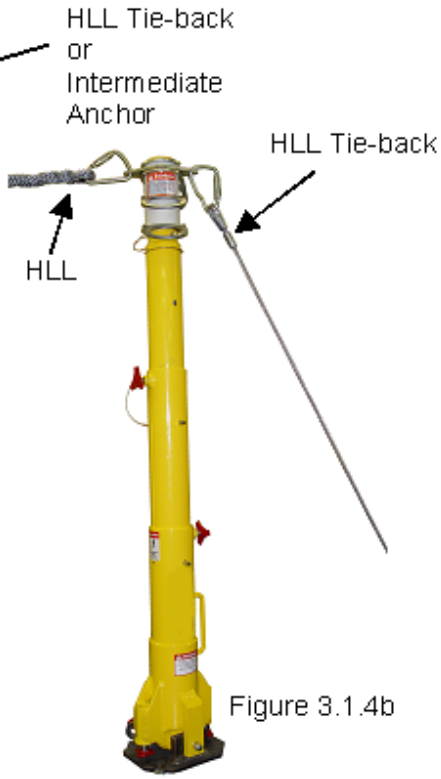


Figure 3.1.4b

Step 5: Install HLL using the carabineer supplied with the HLL assembly to the HLL Anchor Ring provided on the mast as shown in Figure 3.1.5. Follow all manufactures instruction carefully when installing a HLL.

If you require a tie-back, install the tie-back using the opposite eye across from the installed HLL on the HLL Anchor Ring.

Tie-back anchors must be designed and approved by the MILLER and the structure mounting requirements approved by a qualified engineer. Call MILLER to purchase the suitable tie-back for the application.

The MILLER Portable Fall Arrest Post with HLL Anchor Ring can also be used as an intermediate for a HLL to spanning across longer distances.

Figure 3.1.6, HLL Load Ratings Chart		
Positions	No Tie-back Required Maximum Load Rating	HLL Anchor Ring Height
1	3250 lbs	57.25 inches
2	4250 lbs	44 inches
3	4000 lbs	46 inches
4	5700 lbs	32.75 inches

3.2 MOUNTING BASES

3.2.1 DH-Anchor Plates

DH-Anchor Plates are designed to be permanently welded to existing structures in locations of frequent work, or where use of portable base is impractical. These mounting plates are compatible with all **MILLER DURAHOIST PORTABLE FALL-ARREST SYSTEM Posts and Accessories**. DH-Anchor Plates permanently address Portable Fall-Arrest Anchor Post mounting base requirements for steel structures.

3.2.2 Installing DH-Anchor Plates

Specific installation instructions are beyond the scope of this product operator's manual. Consult MILLER DURAHOIST Product Specification Sheets for detailed information on welding procedures, mounting requirements and application restrictions.

3.2.3 Set-up of the Portable Fall-Arrest Post

Install and level the Portable Fall-Arrest Post as outlined in Section 3.1.2.

WARNING

All anchor points or mounting/set-up locations for permanent or portable systems must be approved to local standards by a qualified engineer and must comply with all mounting requirements and application restrictions as outlined on the applicable MILLER Product Specification Sheet. Failure to follow this restriction may result in serious injury or death.

3.3 PORTABLE FALL-ARREST POST ACCESSORIES

3.3.1 General

The **MILLER DURAHOIST PORTABLE FALL-ARREST POST** may be equipped with a variety of accessories to meet additional confined space entry/retrieval, rescue, or fall protection requirements. Use of these accessories may affect the rating and load carrying capacities of the Portable Fall-Arrest Post. Be aware of any limitations imposed on the system by the use of various accessories, and follow any restrictions given on the various product specification sheets, warning labels, this manual and/or related manuals.

All **MILLER DURAHOIST PORTABLE FALL-ARREST SYSTEM and Accessories** are designed for use with shock absorbers and retractable devices having a Maximum Arrest Force (MAF) rating of 900 lb. (4 kN) or less.

Shock absorbers and retractable devices must be installed, maintained and used according to Miller's instructions.

WARNING

The 14-inch Anchor Post Extension and Davit Arm Assembly have some application restrictions when used in different types of applications. The use of these accessories de-rates the system to two workers tied of to the swivel tie-off head (8), Fig.3.1.3. Failure to follow this restriction may result in serious injury or death.

WARNING
This component is rated for a working load of 310 lbs (141 kg) when used with approved components in an approved configuration. Refer to component specifications and rating stickers to establish system design factor.
Part #: 16970

WARNING
This product is approved for use with retractable devices and shock absorbers with a MAXIMUM ARRESTING FORCE (M.A.F.) RATING OF 900 LB. (4KN) OR LESS. Retractable devices and shock absorbers must be installed, maintained and used according to the manufacturer's instructions.
Part #: 13818

WARNING
This mast is to maintain a vertical position at all times it is being used as a fall-arrest anchor point.
Part #: 16994

3.3.2 14” Anchor Post Extension

The 14 inch Post Extension (Pt.# DH-AP-2) is designed to provide a single fall-arrest tie-off point 14 inches above the post’s swivel tie-off rings (See Figure 3.3.1). Use of the 14 inch Post Extension de-rates the Portable Fall-Arrest Post to only two anchor points on the swivel tie-off rings.

For use of the Anchor Post Extension & Davit Arm Assembly together refer to Section 3.3.3 of this manual.

3.3.2.1 Set-Up of the 14” Anchor Post Extension

Install the Portable Fall-Arrest Post following the installation procedure in Section 3.1.2.

Step 1: Shown in Fig. 3.3.1, insert the 14-inch Post Extension (14) into the post (9). Pin the post into position by aligning the holes and inserting the ½ inch pin (7) completely through the Post.

Step 2: Attach the Fall-Arrest Device to the anchor point eye (15).

3.3.2.2 Using the 14” Anchor Post Extension

Connect a shock absorber/ retractable device using a sufficiently rated carabineer to anchor point eye (15).

Using the 14” inch anchor post extension (14) limits the use of only 2 attendants anchored to the Portable Fall Arrest post swivel rings (8) for fall protection.

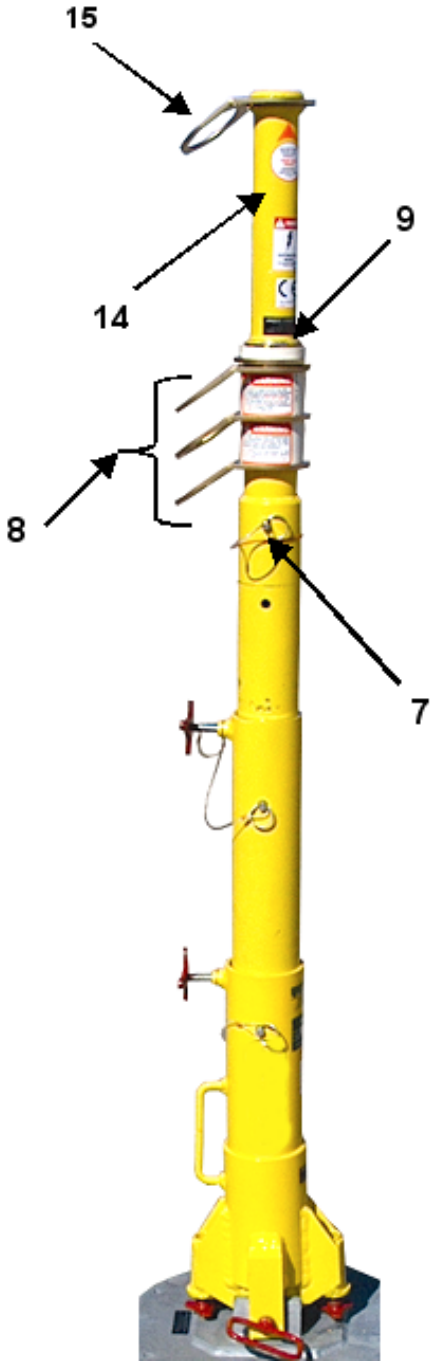
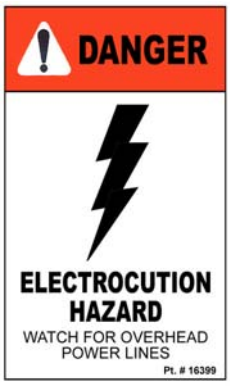


Figure 3.3.1

WARNING
Maximum 3 persons tied off to the UCL Portable Fall Arrest System at any given time with any approved accessories or horizontal lifelines.
Part #: 17435



3.3.3 Anchor Post Davit Arm Assembly

The Anchor Post Davit Arm (Pt.# DH-AP-3) is designed to provide a means of access/egress, rescue, and material handling applications (See Figure 3.6.1). Use of the Anchor Post Davit Arm de-rates the Portable Fall-Arrest Post to only two anchor points on the swivel tie-off rings.

Using the 14" Anchor Post Extension combined with the Anchor Post Davit Arm de-rates the Portable Fall Arrest Post to only one anchor point on the swivel tie-off rings.

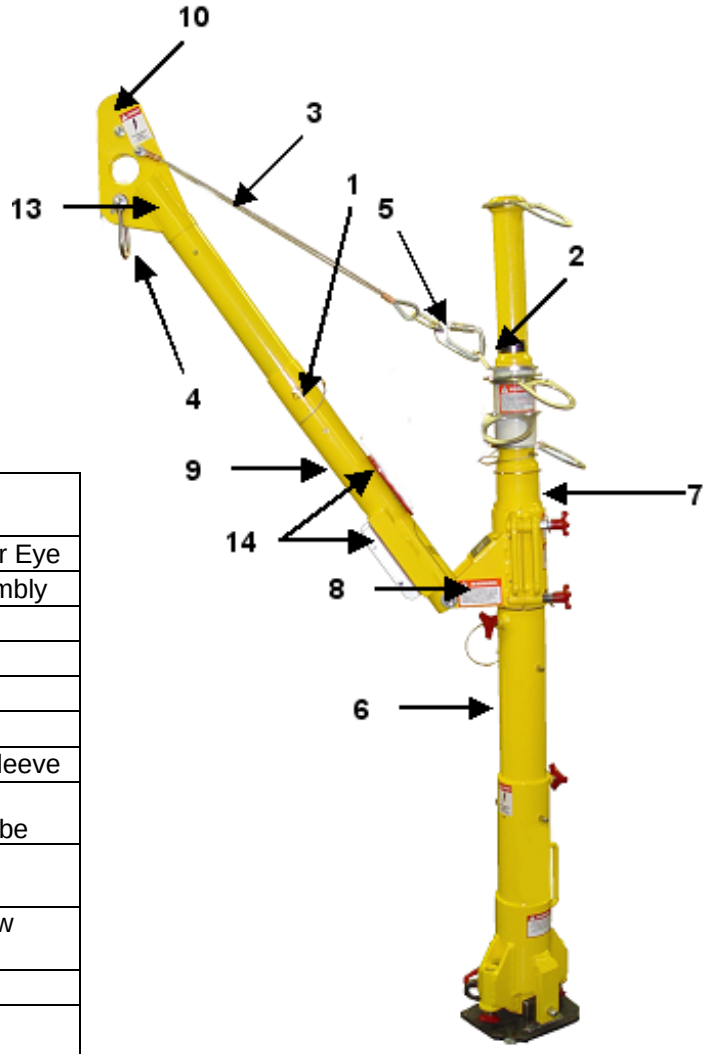


Figure 3.3.2

3.3.3.1 Set-Up of the Anchor Post Davit Arm Assembly

Install the Anchor Post/ Davit Arm Assembly starting with and following the installation procedure in Section 3.1.2.

Step 1: Shown in Figure 3.3.2.1, clamp the Davit Arm Sleeve (8) over Section 3 (7) of the Portable Fall Arrest Post.

Step 2: Install and secure the Davit Arm Sleeve (8) by closing the sleeve around section 3 (7), Figure 3.3.2.1and hand tightening the clamp knob screws (12) shown in Figure 3.3.2.2.

1	3/8" Pin Assembly
2	Davit Anchor Eye
3	Cable Assembly
4	U-Bracket
5	Carabineer
6	Section 2
7	Section 3
8	Davit Arm Sleeve
9	Davit Arm Receiver Tube
10	Head Pin Assembly
11	Clamp Screw Knobs
12	PFA Post
13	Davit Head Assembly
14	Mounting Brackets

Figure 3.3.2.1

Figure 3.3.2.2

Step 3: Insert the Davit Head Assembly (15) and align one of the three 3/8” pin holes in the Davit Arm Receiver Tube. Using the pin (1) secure the Davit Arm into position and to vary the offset.

Step 4: Shown in Figure 3.3.2.4, secure the cable assembly (3) to the Portable Fall Arrest Post (13) using the carabineer (5) provided and connecting it to the Davit Arm Anchor Eye (2), Figure 3.3.2.5.

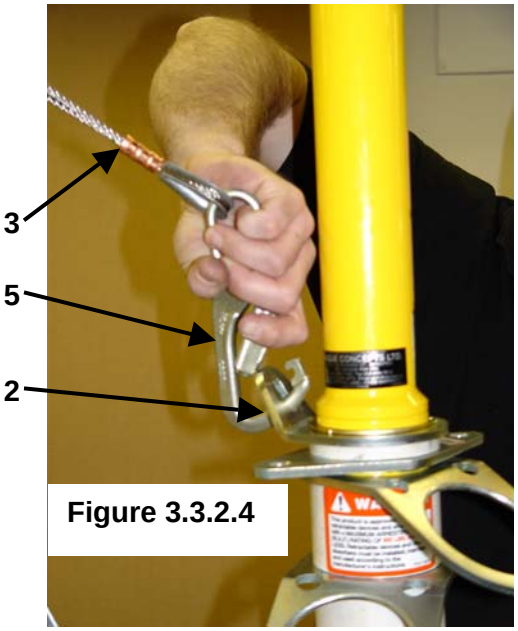


Figure 3.3.2.4

The Portable Fall Arrest Post may be used as a fall arrest anchor point during a rescue scenario. Alternative anchor points for fall protection use should be identified and planned for use during a rescue scenario.

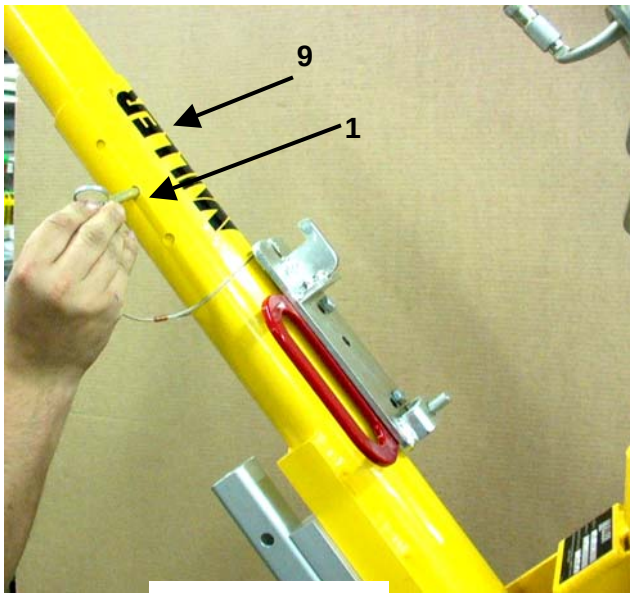


Figure 3.3.2.3

3.3.3.2 Using the Davit Arm Assembly

The Davit Arm Assembly is designed with offset adjustability and 360 degree rotation. This Davit Arm Assembly allows the combined use of an entry/ retrieval winch and a self-retracting lifeline (SRL). See Section 3.3.4 for details on mounting the winch and SRL.

Step 1: Adjust the offset by pulling the pin assembly (1) and selecting the one of three holes offered in the Davit Arm receiver tube (9) as shown in Figure 3.3.2.3.

3.3.3.3 Rescue

The Davit arm can be rotated 360 degrees in a rescue/ retrieval situation so an injured worker can be moved to a safe environment. The Portable Fall Arrest Post must be used in a vertical position at all times to effectively rotate the Davit Arm.

3.3.4 Mounting Brackets for Winch and SRL

The mounting brackets are for use with the Davit Arm Assembly. Winches and SRL's must have a 310 lbs working load and SRL used with the system must have an MAF rating of 900 lbs or less.

3.3.4.1 Set-up of the Mounting Brackets

The mounting brackets will be bolted onto the Davit Arm Assembly when shipped from Miller.

The brackets are arranged to most common Winch/ SRL configuration. If these brackets need to be repositioned to suit your application, remove the two bolts securing the bracket to the Davit Arm Receiver Tube (9) shown in Figure 3.3.3, reposition to other bracket mount location and replace bolts and tighten.

WARNING
This product is approved for use with retractable devices and shock absorbers with a MAXIMUM ARRESTING FORCE (M.A.F.) RATING OF 900 LB. (4KN) OR LESS. Retractable devices and shock absorbers must be installed, maintained and used according to the manufacturer's instructions.
Part #: 13818

WARNING

The Adaptor Brackets for your winch or SRL must be offset to the side that the crank handle is on to eliminate interference between the crank handle and the Davit Arm Assembly and the mounting brackets. Not following these instructions can impair retrieval capabilities that can cause serious injury or death.

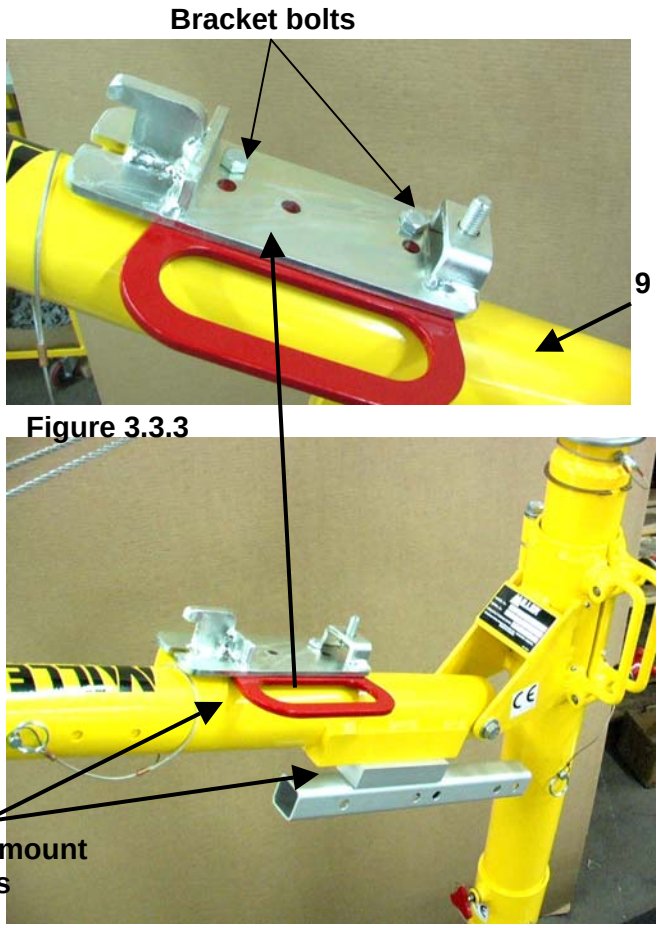


Figure 3.3.3

3.3.4.2 Using the Mounting Brackets

Install and use the winch and/or SRL according to manufacturer's instructions.

Proper operation and maintenance of the winch and/or SRL are critical to the safe usage of your **MILLER DURAHOIST PORTABLE FALL ARREST SYSTEM**.

3.3.5 Winch and SRL Operation

Shown with the accessories in Section 3.3, is the DURAHOIST DH50/50A Man-Rated Winch available for use with the **MILLER DURAHOIST PORTABLE FALL-ARREST SYSTEM**. The winch is necessary for worker positioning and rescue situations when using the Davit Arm Assembly. The winch is available in a variety of lifeline capacities, and lifelines are available in a variety of lengths and materials.

Winches and SRL's must used and maintained in accordance with Miller's instructions, please refer to the instruction manual provided with your winch or SRL.

Proper operation and maintenance of the winch are outlined in the "DH50/50A Winch Operator's Manual", MILLER Pt. # 18713 supplied with every winch.

3.7 STORAGE

Prior to storage, the Portable Fall Arrest System should be thoroughly inspected and maintained. Return for repair or replacement of any worn or damaged components to prevent any unnecessary down time at the next use. Follow this procedure:

1. Thoroughly clean the Portable Fall Arrest system using mild soap on the body and labels. Be sure the labels are legible. Refer to Section 5 for information on ordering replacement labels if any are damaged or become illegible.

2. Use a neutralizing solution to clean lifeline. This is particularly important if the unit had been used in corrosive or toxic environments.

3. Perform a complete inspection of the unit and document the results.

4. Touch up all nicks and scratches to prevent corrosion.

5. Store in a cool dry place.

4 MAINTENANCE AND INSPECTION

MAINTENANCE/INSPECTION SAFETY

1. Read, understand and follow the User Manual and signs on the equipment before using, maintaining or inspecting the equipment.
2. ANSI and OSHA requires a regular inspection program for all Confined Space Entry/Retrieval Equipment and to maintain documented results of these inspections. Follow the inspection procedure contained in this of any other applicable the manual and use the inspection form(s) to document the results.
3. Keep instructional and safety labels clean and legible at all times. Clean or replace as required. See Section 5 for label information and part numbers.
4. Lubricate winch as per instructions in Winch Operator's Manual.
5. Remove the equipment from service if a problem is found during the inspection. Return to an authorized repair depot or the factory for service.

4.1 Maintenance

4.1.1 Maintenance Intervals

Daily

1. **Visual Inspection**
   Perform a complete visual inspection. Refer to Section 4.2.1. Remove from service if a defect is found. Refer to Winch Operator's Manual for visual inspection procedure for the DURAHOIST DH50/50A winch.

Weekly

1. **Functional Inspection**
   Perform a functional inspection. Refer to Section 4.2.2. Record results and keep documentation.

Annually or As Required

1. **Clean Portable Fall Arrest System**
   Thoroughly clean the Portable Fall Arrest system using mild soap on the body and labels. Be sure the labels are legible. Refer to Section 5 for information on ordering replacement labels if any are damaged or become illegible.
2. **Complete Inspection**
   Perform a complete inspection. Refer to Section 4.2 & 4.3. Record results and keep documentation.

4.2 Inspection

4.2.1 Visual Inspection

A complete visual inspection should be performed on the Portable Fall-Arrest System equipment you are using prior to the operation. The following items should be checked; and the results recorded on the “Inspection Log” sheet (see Section 4.3).

1. Labels

Check that all labels are clean and legible. Clean the labels if any are dirty using a mild soap and a damp cloth. Replace if any are illegible (Refer to Section 5 for a listing of all labels).

2. Fasteners

Check that all screws and other fasteners are tight. If any are loose, tighten as required. Contact your MILLER dealer or Miller for any replacement fasteners that may be required.

3. Structural Components

Check the components for cracks, dents, bends, or breaks. Minor cosmetic damage in the component body will not affect the function of the Portable Fall-Arrest System. However if there are major dents or any other structural damage, the unit should be removed form service and returned to Miller for service.

4. Corrosion

Check all components for damage from corrosion. Although all components resist corrosion, working in corrosive environments can lead to damage. Inspect all structural components and fasteners for signs of damage. If corrosion damage is found, remove from service and return to Miller for service.

5. Basic Winch Inspection

Check the winch following the procedure in the DURAHOIST DH50/50A Winch Operator’s Manual, Part # 18713 and carefully document all findings as listed.

4.2.2 Functional Inspection

A functional check should be performed on the Portable Fall-Arrest System prior to every use. The following functional tests should be done; and the results recorded on the “Inspection Log” sheet (Section 4.3).

1. System Operation and Adjustments

The Portable Fall Arrest System contains operational parts that may include pulleys and /or rollers. These parts must be carefully checked for chips, cracks, or worn areas that can cause malfunction during operation of the system.

Make sure that all the adjustment points are in full functional condition. This may include parts that contain pins, bolts, tri-screws, and adjusting screws. There are also mechanical adjustments which may include, adjustable legs, sleeves, adjustable sliding blocks, and brackets. These areas must be kept clean from debris and corrosion for proper functional use. If any part of the system that includes all listed items above becomes damaged contact your local dealer or manufacturer for parts and/or service.

2. Basic Winch Inspection

Refer to the Basic Winch Operator’s Manual, Pt.# 16182 (where applicable) for proper functional inspection procedures for the Basic winch and lifeline.

3. SRL and other Accessory Inspection

Refer to the manufacture’s operator’s manual or instructional material for proper functional inspection procedures for SRL’s and accessories not covered by this manual.

4.3 Inspection Log

Date:_____

4.3.1 Portable Fall-Arrest Post Inspection Log

Page_____of_____

Sample Form. Copy page to start inspection log record book. Fill out using ball point pen.

Equipment Identification (Type, Application, Usage & Storage Location)
Date of Inspection:
Application of Product:
Inspector:

Components (Please write description below)	Serial # if Applicable	Paint & Labels	Fasteners (Secure & Undamaged)	Corrosion & Details	Structural Damage & Details	Corrective Action Taken (if required)	Sign Off

* Winch inspection and documentation as per Winch Manual.
* Record Winch serial numbers and counter reading under "components"

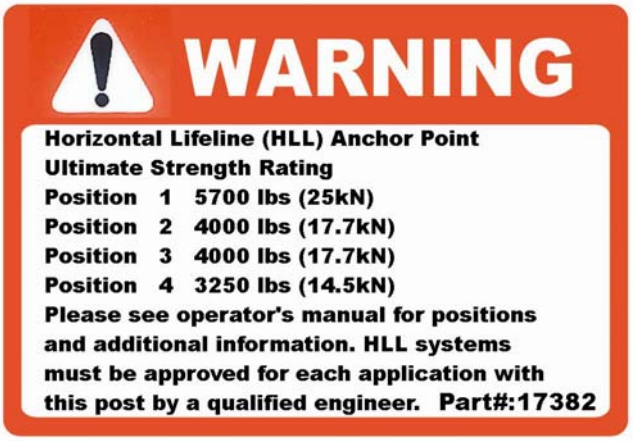
5 LABELS

5.1 Warning Labels

The **MILLER DURAHOIST PORTABLE FALL-ARREST SYSTEM** uses a label rating system that is attached to all components on the system.

The operator and/or entrant must establish the local standards by a qualified engineer and only then, a decision can be made by the rating labels as to which is the lowest rated component and if it meets or exceeds local standards.

Proper maintenance of the labels must be established by the operator/entrant to keep system use safe. If labels are damaged the operator/entrant must enforce a lock-out/tag-out procedure. New labels are available from Miller.

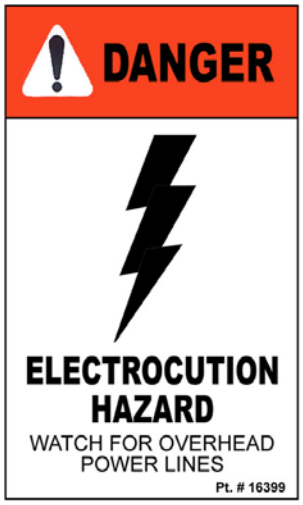

WARNING
Horizontal Lifeline (HLL) Anchor Point
Ultimate Strength Rating
Position 1 5700 lbs (25kN)
Position 2 4000 lbs (17.7kN)
Position 3 4000 lbs (17.7kN)
Position 4 3250 lbs (14.5kN)
Please see operator's manual for positions and additional information. HLL systems must be approved for each application with this post by a qualified engineer. Part#:17382

WARNING
Maximum 3 persons tied off to the UCL Portable Fall Arrest System at any given time with any approved accessories.
Part #: 17435

WARNING
This product is approved for use with retractable devices and shock absorbers with a MAXIMUM ARRESTING FORCE (M.A.F.) RATING OF 900 LB. (4KN) OR LESS. Retractable devices and shock absorbers must be installed, maintained and used according to the manufacturer's instructions.
Part #: 13818

WARNING
This mast is to maintain a vertical position at all times it is being used as a fall-arrest anchor point.
Part #: 16994

WARNING
This component is rated for a working load of 310 lbs (141 kg) when used with approved components in an approved configuration. Refer to component specifications and rating stickers to establish system design factor.
Part #: 16970



5 Labels con’t

Operator Instructions:
To equipment user- you must read and understand the operator’s manual or have the instructions explained to you before each using this product.

Visually inspect the hoist and its components for damage and/or missing hardware. If defects are found remove from service using lock out/tag-out procedures.

Visually inspect all warning labels to make sure they legible, if not remove from service and order replacement labels from the manufacturer.

Any alteration or misuse of this equipment can result in serious injury or death.

Davit Arm Instructions:

Clamp the davit arm shell around the third section of the Portable Fall Arrest Post; tighten down both screws to secure.

Connect carabineer to the Davit Anchor marked “DVT”.

Pull the pin and adjust the offset according to applications height and reach.

Maximum 3 persons tied off to the UCL Portable Fall Arrest system at any given time with any UCL approved accessories.

Horizontal lifeline (HLL) Instructions:

For HLL applications, refer to Section 3.1.3 of the operator’s manual Pt# 17022 or 17451 for combined use with the davit arm.

Specifications:

Personnel Load Capacity: 310 lbs. @ 10:1 Safety Factor
Material Load Capacity: 620 lbs. @ 5:1 Safety Factor

Materials and Construction:
General construction: Powder Coated, Welded Aluminum
Weld Certification: CWB 47.2
Tubular Components: 6061-T6 Alum.
Other Components: HD Plastic, HR Steel
Steel Components: CS500 Plated
Block Anchor: Stainless Steel
Hardware: Gr.5/Gr.8 Steel, Zinc Plated

Compliance:

ANSI Z117.1-1989, OSHA 1910, ANSI Z359.1-1992 (Anchor Point Only) EN 795, EN 364, ISO 14567

Pt# 17434

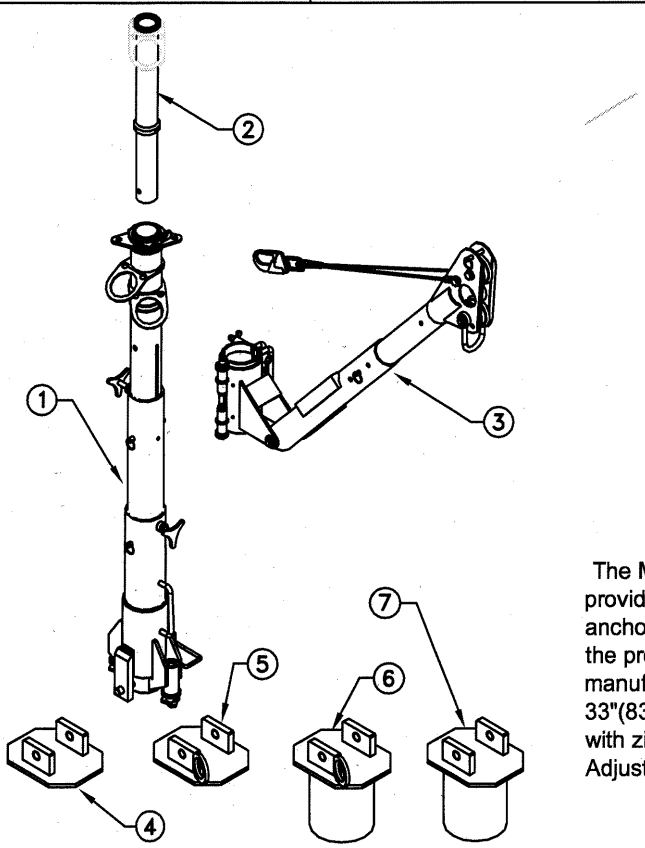
6 SPECIFICATION SHEETS

6.1 General

These specification sheets contain information necessary for the proper installation and use of the equipment mentioned in this manual. These specifications contain application specific ratings and mounting requirements determined through design and testing.

Please read and follow these specification sheets carefully to ensure the proper installation of each item.

MILLER DURAHOIST ALUMINUM FALL-ARREST ANCHOR POST
MODEL: DH-AP-1



Model DH-AP-1 includes the following

Item	Part no.	Description
1	DH-AP-1	MILLER DURAHOIST Aluminum Portable Fall-Arrest Anchor Post
accessories shown, but not included		
2	DH-AP-2	MILLER DURAHOIST Aluminum Portable Fall-Arrest Anchor Post Extension
3	DH-AP-3	MILLER DURAHOIST Aluminum Portable Fall-Arrest Anchor Post Davit Arm Ass'y
4	DH-AP-5	Weld-On Plate, Bare Steel
5	DH-AP-4	Weld-On Plate c/w Tie-Off Anchor, Bare Steel
6	DH-AP-6	Weld-On Plate for Inclined Surfaces c/w Tie-Off Anchor, Bare Steel
7	DH-AP-7	Weld-On Plate for Inclined Surfaces, Bare Steel

DESCRIPTION

The MILLER DURAHOIST Portable Fall-Arrest System Anchor Post provides 3 independant swivelling tie-off points for fall arrest anchorage. Increased height over previous models more than doubles the protection area around the post. 3-section telescoping design is manufactured from lightweight aluminum, and collapses to only 33"(838mm) for transport and storage. Durable powder coat finish with zinc plated steel components for long corrosion resistance. Adjustable to compensate for up to 15° of mounting surface incline.

General Specifications:

Working Load	
Fall-Arrest	3 Workers using 900 lb MAF Shock Absorbers
Safety Factor	Minimum 2:1
Material Handling (with model DH-AP-3 Davit Arm)	310 lbs (141 kg)
Safety Factor	10:1
Rescue	310 lbs (141 kg)
Safety Factor	10:1
Proof Load	4200 lb (18.7kN) Pulled from 72" (1828.8mm) from post centerline (53° to vertical)
Proof Load Moment	190000 in-lb (20.8 kN-m)
Horizontal Lifeline Anchor Point Proof Load	See Page 2 of 2
Proof Tests	UCT-343, 344, 345, 346, 347, 368, 369, 370, 371, 372, 373, 374, 389, 390, 391, 401
Weight	38 lbs (17.5 kg)

Materials & Construction:

General Construction	Welded Steel / Aluminum
Weld Certification	CWB-47.1, CWB-47.2
Material (aluminum)	6061-T6 Aluminum
Material (steel)	H.R. Steel Plate, Sch. 40 Pipe
Finish (aluminum)	Powder Coat
Finish (steel)	CS-500 Zinc Plated
Swivel Ring Bushing	PVC Pipe, ASTM-D-1785
Hardware	Gr.5, Gr.8 - Zinc Plated
Plating Specification	ASTM Designation B633-85, Type II, SC2, CS-500 Leachant/Sealant Process

Application Restrictions

1. A maximum of three(3) workers may be tied-off to the Anchor Post at any one time. Use of various accessories may reduce the number of workers that may be anchored. Consult product specification sheets for all components of any system, and be aware of any restrictions before using the equipment.
2. The Portable Fall-Arrest Anchor Post **MUST BE** in a vertical position at any time it is being used as a fall-arrest anchor post.
3. The installed Anchor Post assembly **MUST BE** 72" (1830mm) or less from any edge where a fall may occur.
4. Retractable devices and shock absorbers **MUST HAVE** a maximum arresting force (M.A.F.) of 900 lbs (4 kN) or less and **MUST BE** installed and used in accordance with manufacturer's instructions.
5. The Portable Fall-Arrest Mast **MUST ONLY BE** used with accessories supplied by or approved by MILLER.
6. H.L.L. **MUST BE** installed using chart on Page 2 of 2 giving due consideration to strength limitations at various positions.
7. The Anchor Post **MUST BE** used with a tie-back in Horizontal Lifeline applications at **ANY** extended height. Failure to follow this instruction may result in serious injury or death.
8. Each installation **MUST BE** approved to local standards by a qualified engineer.

DALLOZ FALL PROTECTION, 1345 15th Street, Franklin, PA, USA 16323
Phone: (814) 432-2118 Fax: (814) 437-2973, www.bacou-dalloz.com

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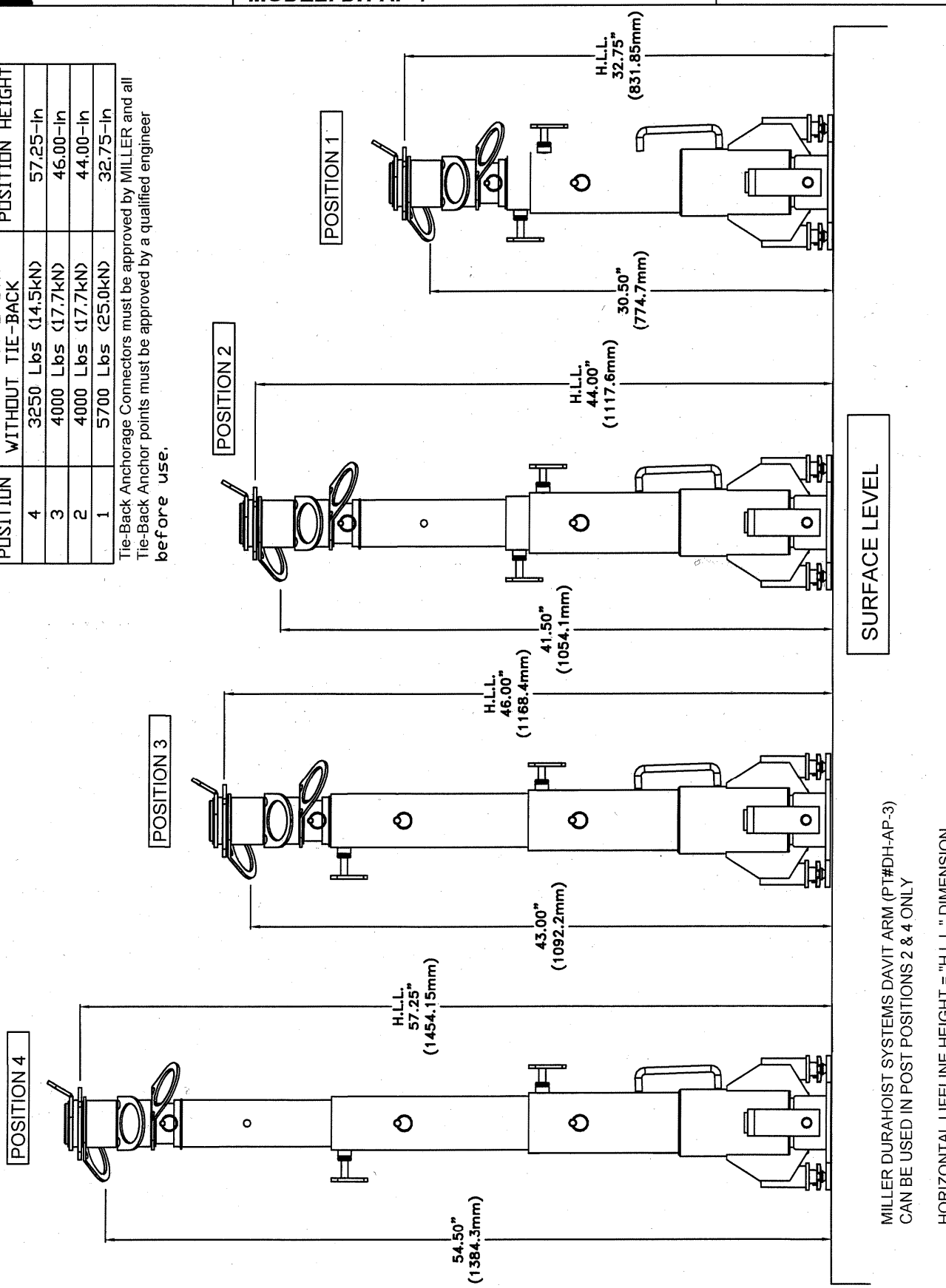
HORIZONTAL LIFELINE (H.L.L.) POSITIONS & RATINGS

POSITION	ULTIMATE STRENGTH WITHOUT TIE-BACK	POSITION HEIGHT
4	3250 Lbs (14.5kN)	57.25-In
3	4000 Lbs (17.7kN)	46.00-In
2	4000 Lbs (17.7kN)	44.00-In
1	5700 Lbs (25.0kN)	32.75-In

Tie-Back Anchorage Connectors must be approved by MILLER and all Tie-Back Anchor points must be approved by a qualified engineer **before use.**



MILLER DURAHOIST SYSTEMS DAVIT ARM (PT#DH-AP-3)
CAN BE USED IN POST POSITIONS 2 & 4 ONLY

HORIZONTAL LIFELINE HEIGHT = "H.L.L." DIMENSION

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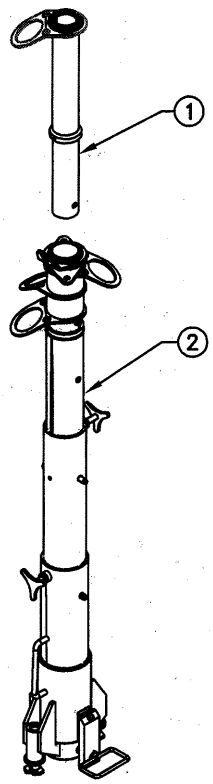
MILLER DURAHOIST ALUMINUM PORTABLE FALL-ARREST ANCHOR POST EXTENSION
MODEL: DH-AP-2



Model DH-AP-2 includes the following

Item	Part no.	Description
1	DH-AP-2	MILLER DURAHOIST Aluminum Portable Fall-Arrest Anchor Post Extension
accessories shown, but not included		
2	DH-AP-1	MILLER DURAHOIST Portable Fall-Arrest System Anchor Post

DESCRIPTION

The Extension Post is designed for use with MILLER DURAHOIST portable fall-arrest system anchor post to provide a single fall-arrest tie-off point above the swivel tie-off rings.

General Specifications:

Rated Capacity (*working load*)	310 lbs. (141 Kgs.)
Max. Allowed Arresting Force (M.A.F.) rating for retractable Devices or shock absorbers	900 lbs. (4 KN.)
Proof Load Anchor point eye	2250 lbs. (10 KN.) @ 45°
Proof Tests	UCT-353, 354, 355, 356, 375
Weight	4.5 lbs. (2.1 Kgs.)

Materials & Construction:

General Construction	Machined Aluminum
Tubular Components	6061-T6 Aluminum
Anchor Point Eye	Mild Steel, CS-500 Zinc Plated
Finish	Powder Coat
Plating Specifications	ASTM B-633 Type II SC2, CS-500 Leachant/Sealant Process

Application Restrictions:

1. This extension is to be used with the MILLER DURAHOIST Portable Fall-Arrest System Anchor Post **ONLY**.
2. The Extension may be used to anchor (1) worker **ONLY**.
3. Installed Anchor Post and accessories **MUST BE** 72" (1830mm) or less from any edge where a fall may occur.
4. Use of the extension derates the portable fall-arrest anchor post assembly to a maximum of TWO(2) workers tied off to the swivel tie-off head.
5. Portable fall-arrest system anchor post **MUST BE** in a vertical position any time it is being used as a fall-arrest anchor point.
6. Retractable devices and shock absorbers **MUST HAVE** a maximum arrest force (M.A.F.) rating of 900 lbs. (4 KN.) or less, and **MUST BE** installed and used in accordance with the manufacturer's instructions.
7. Each installation **MUST BE** approved to local standards by a qualified engineer.

CERTIFICATION

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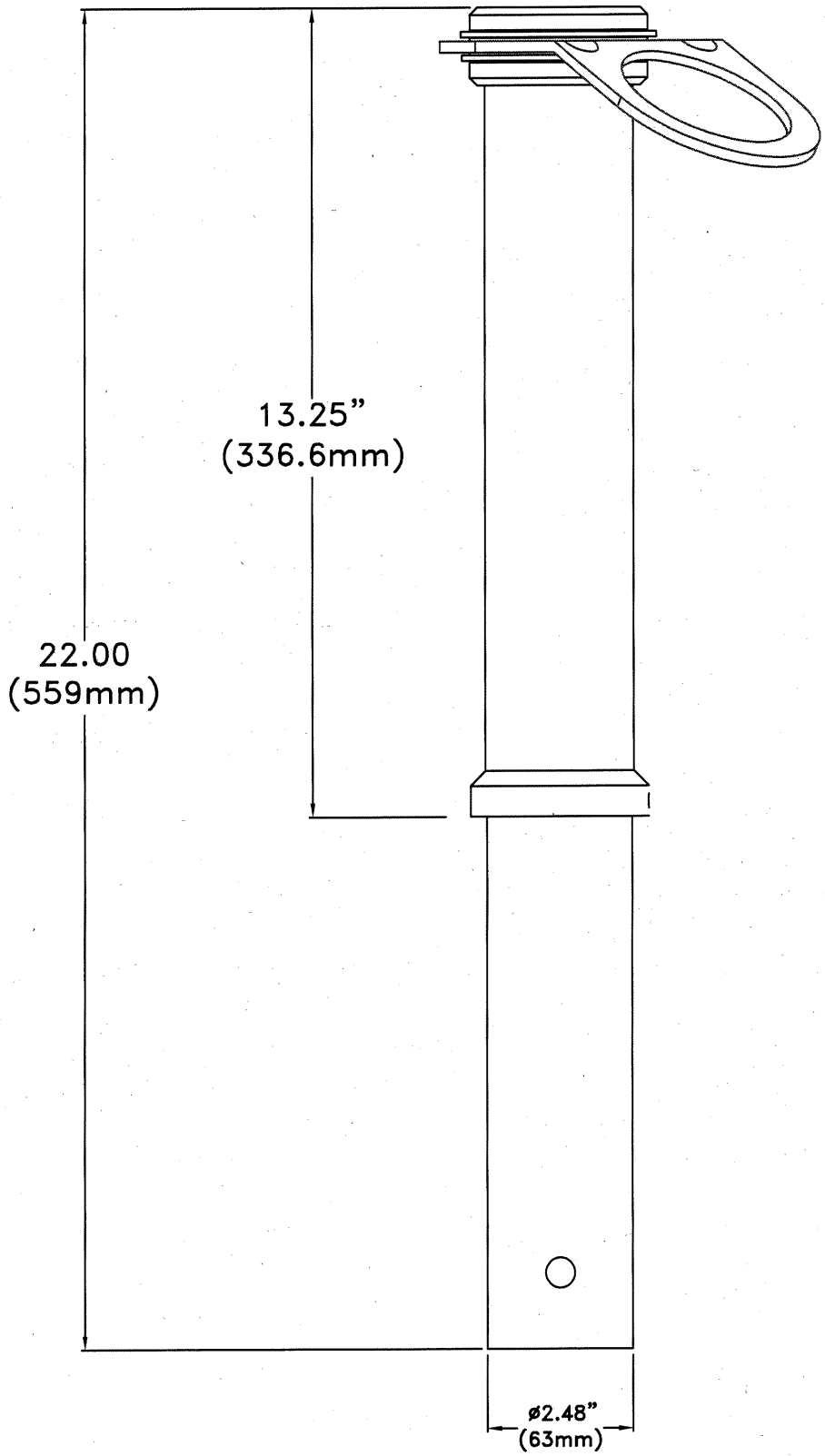

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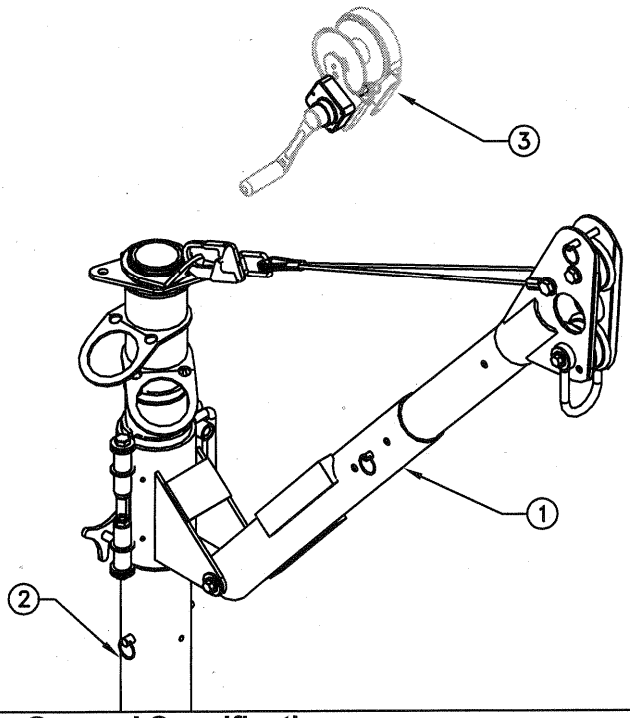
Model DH-AP-3 includes the following

Item	Part no.	Description
1	DH-AP-3	MILLER DURAHOIST Portable Fall-Arrest Anchor Post Davit Arm Assembly
accessories shown, but not included		
2	DH-AP-1	MILLER DURAHOIST PFAS Anchor Post
3	------	Typical Winch/SRL w/ Appropriate Mounting Bracket



DESCRIPTION

The MILLER DURAHOIST Anchor Post Davit Arm attaches quickly, without the use of any tools, to the Portable Fall-Arrest System Anchor Post. Fitted with a suitable winch or self retracting lifeline, the Davit Arm can be used for a wide variety of access/egress, rescue, and material handling applications. Lightweight aluminum construction and durable powdercoat finish.

General Specifications:

Working Load	
Material Handling	310 lb (141 kg)
Safety Factor	10:1
Rescue	310 lb (141 kg)
Safety Factor	10:1
Proof Load	
Outer Anchor Point	3100 lbs (13.8 kN)
Winch/SRL Bracket	3100 lbs (13.8 kN)
Maximum Allowed Arrest Force (MAF) Rating of Shock Aborbers and Retractable Devices	900 lbs (4 kN)
Test Numbers	UCT-357, 358, 359, 360, 361, 376, 378, 397, 398, 399, 400
Weight	20.5 lbs(9.3 kg)

Materials & Construction:

General Construction	Welded/Machined Aluminum
Weld Certification	CWB-47.1, CWB-47.2
Material (aluminum)	6061-T6 Aluminum
Cable	3/16" 7 X 19 Stainless Steel
Pully Wheel	Black Acetal
Finish(Aluminum Parts)	Powder Coat
Finish(Steel Parts)	CS-500 Zinc Plate
Bearing Material	PVC Pipe, ASTM-D-1785
Hardware	Minimum Grade 5, Zinc Plated
Plating Specification	ASTM Designation B633-85, Type II SC2, CS-500 Leachant/Sealant Process

Application Restrictions

1. This device is to be used with the MILLER DURAHOIST Portable Fall-Arrest System Anchor Post **ONLY**.
2. Use of this device de-rates the Anchor post to a maximum of two(2) workers tie-off to the swivel tie-off rings.
3. The installed Anchor Post **MUST BE** 72" (1830mm) or less from any edge where a fall may occur.
4. Portable Fall-Arrest System Anchor Post **MUST BE** in a vertical position any time it is being used as a fall-arrest anchor post.
5. Retractable devices and shock absorbers **MUST HAVE** a maximum arrest force (M.A.F.) rating of 900 lbs. (4kN) or less, and **MUST BE** installed and used in accordance with the manufacturer's instructions.
6. Each installation **MUST BE** approved to local standards by a qualified engineer.

Certification

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Phone: (814) 432-2118 Fax: (814) 437-2973, www.bacou-dalloz.com

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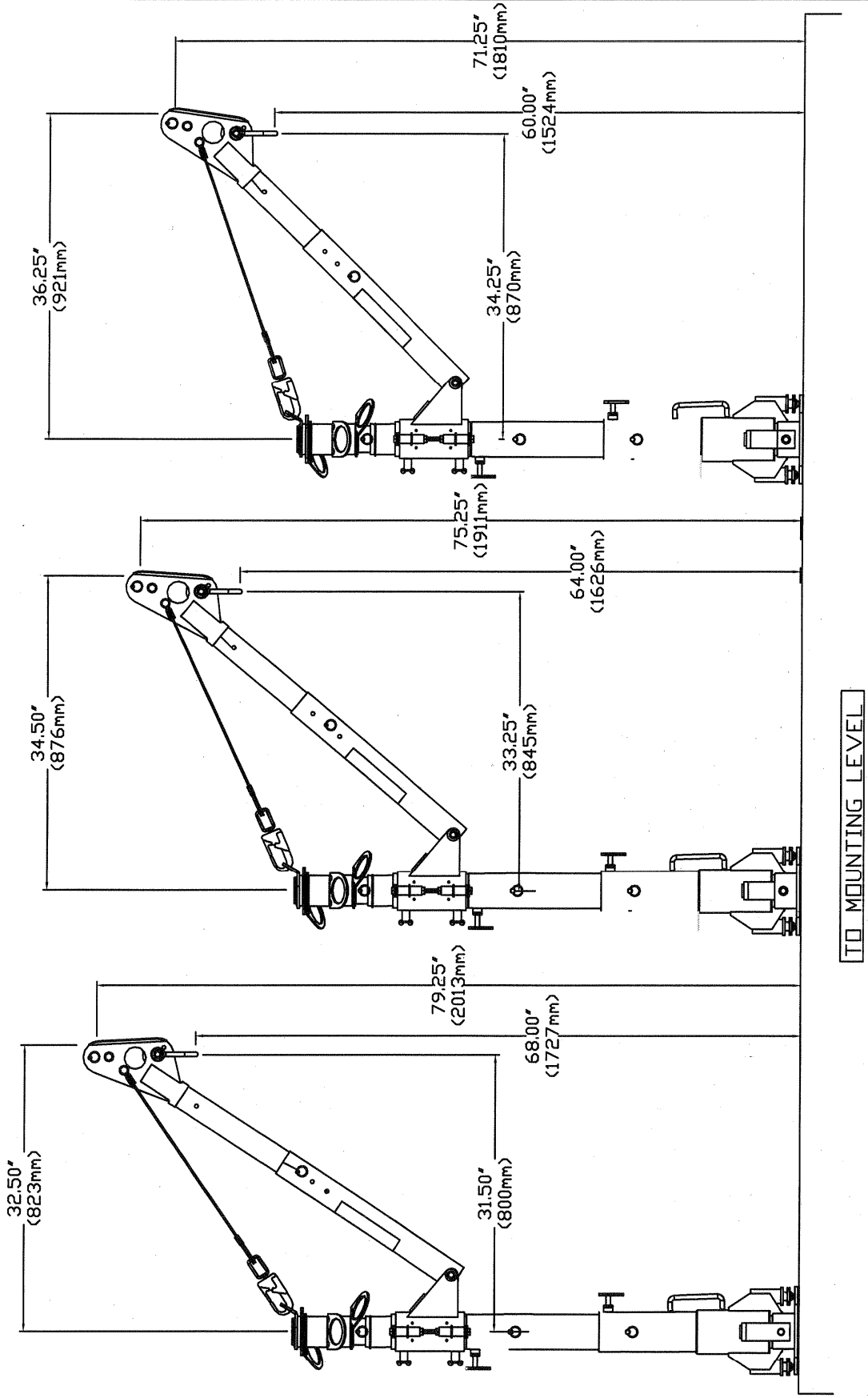

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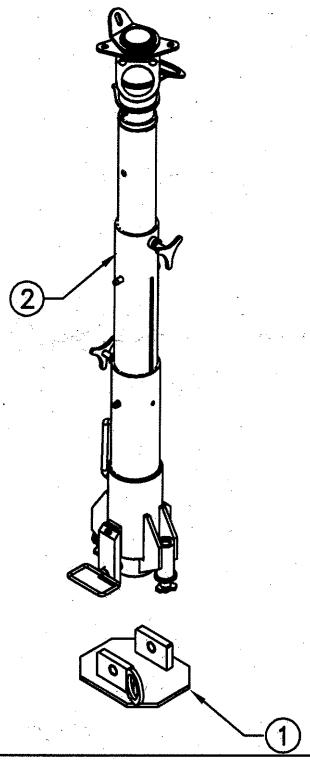

Model DH-AP-4 includes the following

Item	Part no.	Description
1	DH-AP-4	PFAS Weld-on Plate c/w Tie-Off Anchor
ACCESSORIES SHOWN IN GREY BUT ARE NOT INCLUDED		
2	DH-AP-1	MILLER DURAHOIST Portable Fall-Arrest System Anchor Post

DESCRIPTION

The DH-AP-4 Weld-on Plate is designed to be permanently welded to existing structures in locations of frequent work, or where use of a portable base is impractical. Compatible with all MILLER DURAHOIST portable fall-arrest masts & accessories. The weld-on plate permanently addresses your fall-arrest anchor point requirements.

General Specifications:

Proof Load Moment	190,000 in/lb (20.84 KN.m)
Anchor Eye Proof Load	5000 lbs (22.2 kN)
Weight	11.8 lbs. (5.3 Kgs.)

The Weld-on Plate when installed & used in accordance with the manufacturer's instructions, is designed to support the loads required by all portable fall-arrest masts and accessories when installed and used in accordance with manufactures instructions.

Materials & Construction:

General Construction	Welded Steel
Weld Certification	CWB-47.1
Material	H.R. Plate & bar
Finish	Provided in bare steel for welding

Mounting Requirements

Fall-Arrest Post Model # & Type	Momemt Requirement	Vertical Load Requirement
* Model DH-AP-1 Portable Fall-Arrest Anchor Post	190,000 in-lbs (20.8 kN-m)	3100 lbs (13.8 kN)

Application Restrictions

1. The Weld-on Plate is designed for use with all MILLER DURAHOIST portable fall-arrest masts & accessories **ONLY**.
2. Ratings, capacities and design factor may vary with system components & configurations. Consult specification sheets for all system components before using to ensure compliance with requirements.
3. Welding procedure **MUST BE** approved by qualified personnel to be compatible with any and all structural & operational characteristics of the selected installation location.
4. Mounting surface **MUST BE** within 15° of horizontal for Model DH-AP-1 and plate **MUST BE** installed so that the portable fall-arrest mast can be leveled for use.
5. Each installation **MUST BE** approved to local standards by a qualified engineer.

CERTIFICATION

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Phone: (814) 432-2118 Fax: (814) 437-2973, www.bacou-dalloz.com

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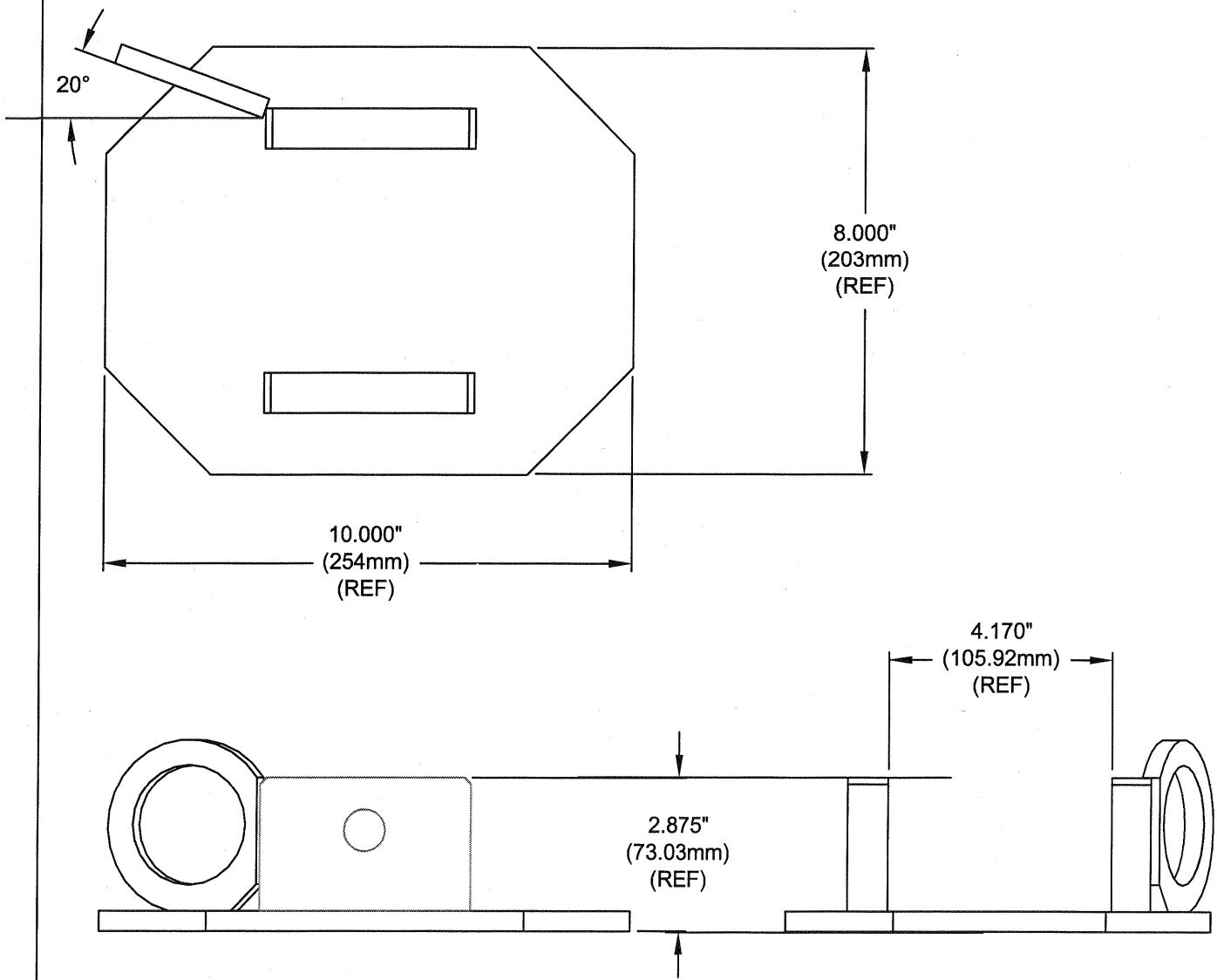

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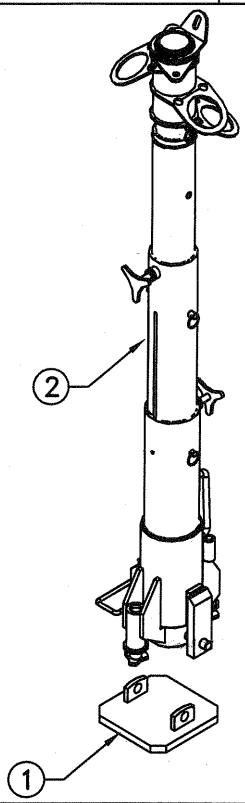

Model DH-AP-5 includes the following

Item	Part no.	Description
1	DH-AP-5	Portable Fall-Arrest Weld-on Plate
ACCESSORIES SHOWN IN GREY BUT ARE NOT INCLUDED		
2	DH-AP-1	MILLER DURAHOIST Portable Fall-Arrest System Post

DESCRIPTION

The DH-AP-5 Weld-on Plate is designed to be permanently welded to existing structures in locations of frequent work, or where use of a portable base is impractical. Compatible with all MILLER DURAHOIST portable fall-arrest masts & accessories. The weld-on plate permanently addresses your fall-arrest anchor point requirements.

General Specifications:

Proof Load Moment	190,000 in/lb (20.8 KN.m)
Proof Tests	UCT-140, UCT-185, UCT-186
Weight	11.6 lbs. (5.2 Kgs.)

The Weld-on PLate when installed & used in accordance with the manufacturer's instructions, is designed to support the loads required by all portable fall-arrest masts and accessories when installed and used in accordance with manufactures instructions.

Materials & Construction:

General Construction	Welded Steel
Weld Certification	CWB-47.1
Material	H.R. Plate & bar
Finish	Provided in bare steel for welding

Mounting Requirements

Fall-Arrest Post Model # & Type	Momemt Requirement	Vertical Load Requirement
Model DH-AP-1 Portable Fall-Arrest Post	190,000 in-lbs (20.8 kN-m)	3100 lbs (13.8 kN)

Application Restrictions

1. The Weld-on Plate is designed for use with all MILLER DURAHOIST portable fall-arrest masts & accessories **ONLY**.
2. Ratings, capacities and design factor may vary with system components & configurations. Consult specifications sheets for all system components before using to ensure compliance with requirements.
3. Welding procedure **MUST BE** approved by qualified personnel to be compatible with any and all structural & operational characteristics of the selected installation location.
4. Mounting surface **MUST BE** within 15° of horizontal for DH-AP-1 and plate **MUST BE** installed so that the portable fall-arrest mast can be leveled for use.
5. Each installation **MUST BE** approved to local standards by a qualified engineer.

CERTIFICATION

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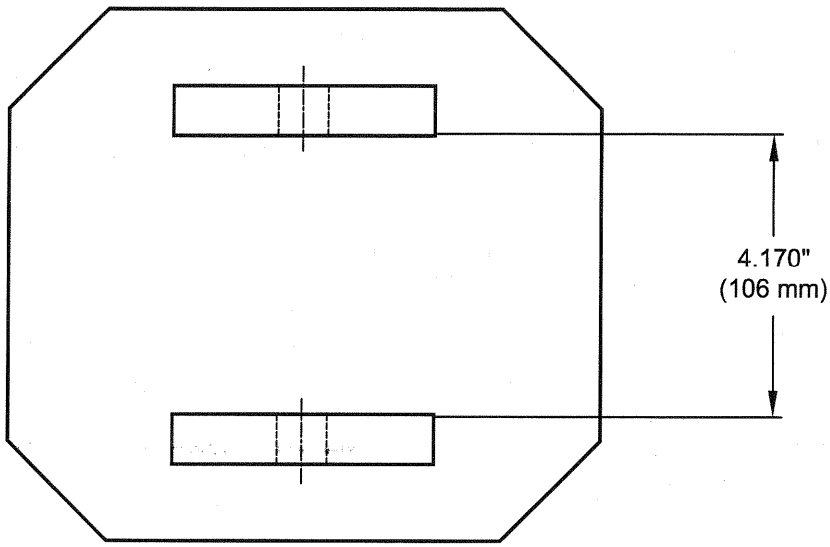

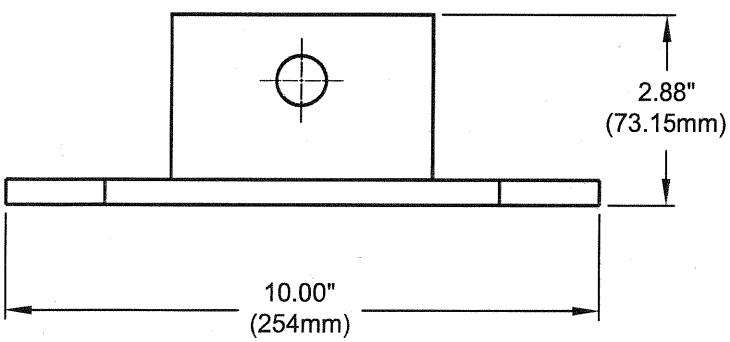

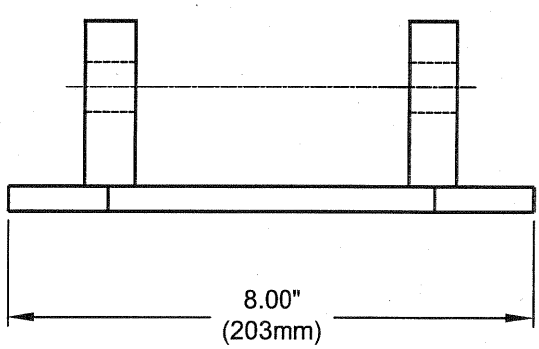

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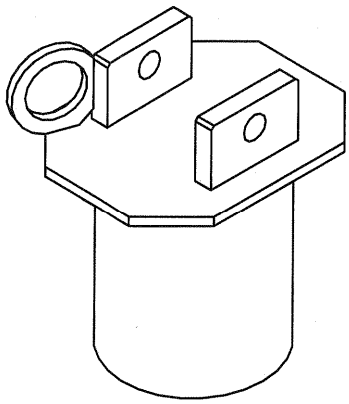
Model DH-AP-6 includes the following

Item	Part no.	Description
1	DH-AP-6	WELD-ON PLATE FOR INCLINED SURFACES w/TIE-OFF ANCHOR



DESCRIPTION

The DH-AP-6 is designed to be permanently welded to existing structures in locations of frequent work, or where use of a portable base is impractical. Compatible with all MILLER DURAHOIST portable fall-arrest masts & accessories. The weld-on plate permanently addresses your fall-arrest anchor point requirements.

General Specifications:

Proof Load Moment	190,000 in/lb (20.84 KN.m)
Anchor Eye Proof Load	5000 lbs (22.2 kN)
Weight	24.0 lbs. (10.9Kgs.)

The Weld-on Plate when installed & used in accordance with the manufactures instructions, is designed to support the loads required by all portable fall-arrest masts and accessories when installed and used in accordance with manufactures instructions.

Materials & Construction:

General Construction	Welded Steel
Weld Certification	CWB-47.1
Material	H.R. Plate, bar & tube
Finish	None

Mounting Requirements

Fall-Arrest Post Model # & Type	Momemt Requirement	Vertical Load Requirement
* Model DH-AP-1 Portable Fall-Arrest Anchor Post	190,000 in-lbs (20.8 kN-m)	3100 lbs (13.8 kN)

Application Restrictions

1. The Weld-on Plate is designed for use with all MILLER DURAHOIST portable fall-arrest masts & accessories **ONLY**.
2. Ratings, capacities and design factor may vary with system components & configurations. Consult specification sheets for all system components before using to ensure compliance with requirements.
3. Welding procedure **MUST BE** approved by qualified personnel to be compatible with any and all structural & operational characteristics of the selected installation location.
4. Mounting surface **MUST BE** within 15° of horizontal for Model DH-AP-1 and plate **MUST BE** installed so that the portable fall-arrest mast can be leveled for use.
5. Each installation **MUST BE** approved to local standards by a qualified engineer.

CERTIFICATION

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Phone: (814) 432-2118 Fax: (814) 437-2973, www.bacou-dalloz.com

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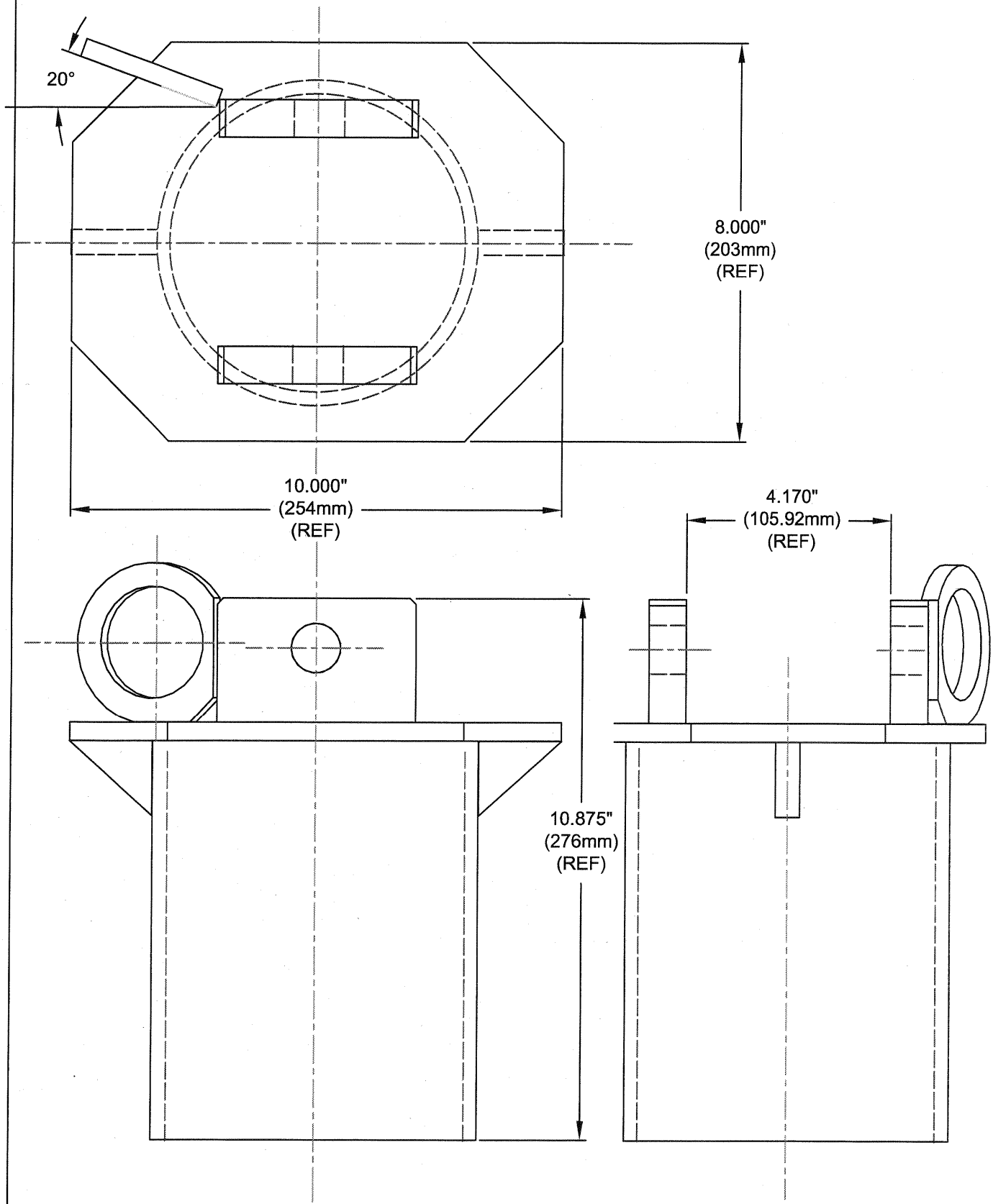

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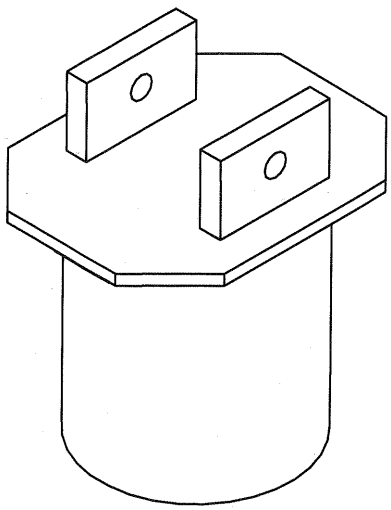

Model DH-AP-7 includes the following

Item	Part no.	Description
1	DH-AP-7	PFAS Weld-on Plate for Inclined Surfaces
ACCESSORIES SHOWN IN GREY BUT ARE NOT INCLUDED		
2	DH-AP-1	MILLER DURAHOIST Portable Fall-Arrest System Post

DESCRIPTION

The DH-AP-7 Weld-on Plate is designed to be permanently welded to existing structures in locations of frequent work, or where use of a portable base is impractical. Compatible with all MILLER DURAHOIST portable fall-arrest masts & accessories. The weld-on plate permanently addresses your fall-arrest anchor point requirements.

General Specifications:

Proof Load Moment	190,000 in/lb (20.84 KN.m)
Weight	23.4 lbs. (10.6 Kgs.)

The Weld-on Plate when installed & used in accordance with the manufactures instructions, is designed to support the loads required by all portable fall-arrest masts and accessories when installed and used in accordance with manufactures instructions.

Materials & Construction:

General Construction	Welded Steel
Weld Certification	CWB-47.1
Material	H.R. Plate, bar & tube
Finish	None

Mounting Requirements

Fall-Arrest Post Model # & Type	Momemt Requirement	Vertical Load Requirement
* Model DH-AP-1 Portable Fall-Arrest Anchor Post	190,000 in-lbs (20.8 kN-m)	3100 lbs (13.8 kN)

Application Restrictions

1. The Weld-on Plate is designed for use with all MILLER DURAHOIST portable fall-arrest masts & accessories **ONLY**.
2. Ratings, capacities and design factor may vary with system components & configurations. Consult specification sheets for all system components before using to ensure compliance with requirements.
3. Welding procedure **MUST BE** approved by qualified personnel to be compatible with any and all structural & operational characteristics of the selected installation location.
4. Mounting surface **MUST BE** within 15° of horizontal for Model DH-AP-1 and plate **MUST BE** installed so that the portable fall-arrest mast can be leveled for use.
5. Each installation **MUST BE** approved to local standards by a qualified engineer.

CERTIFICATION

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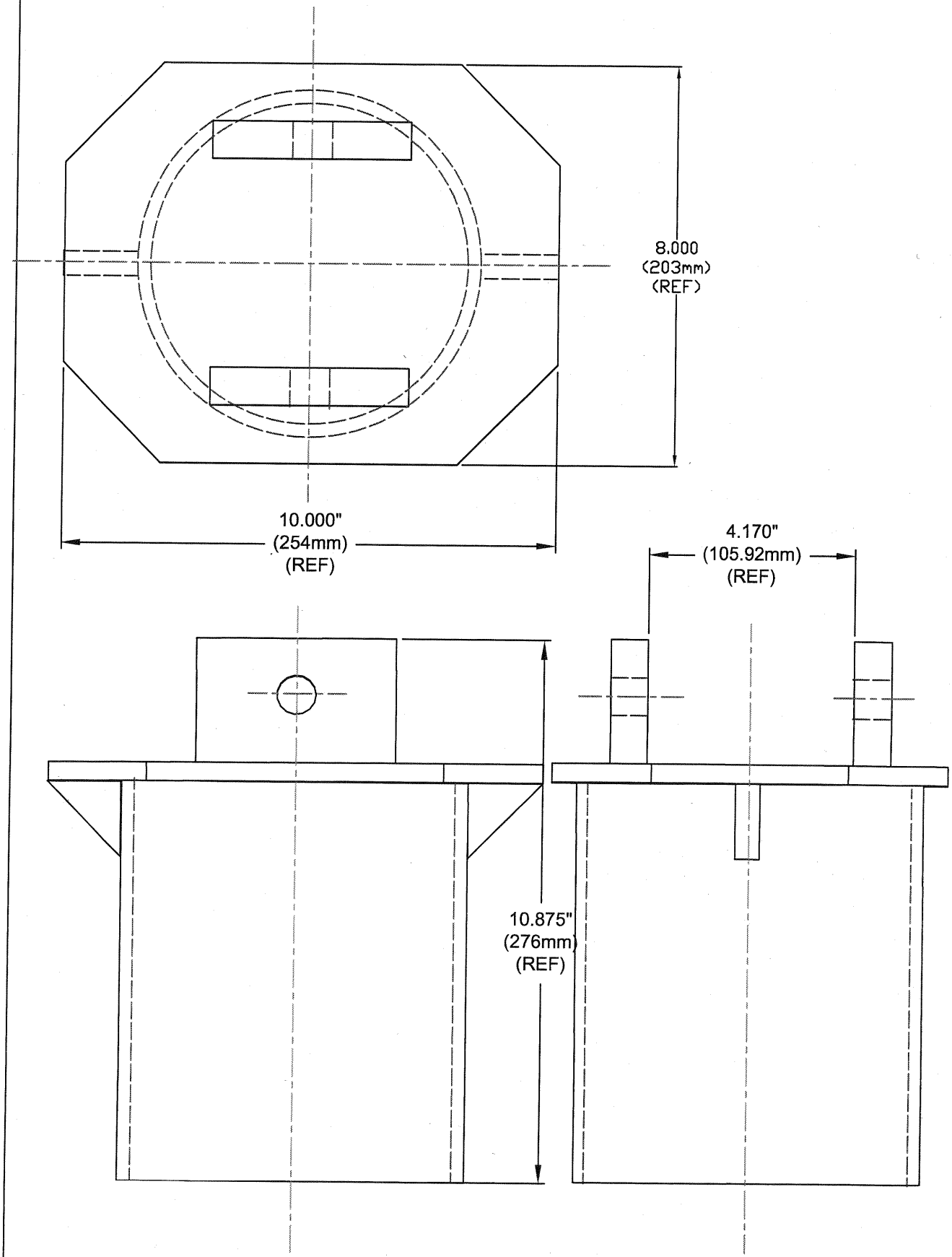

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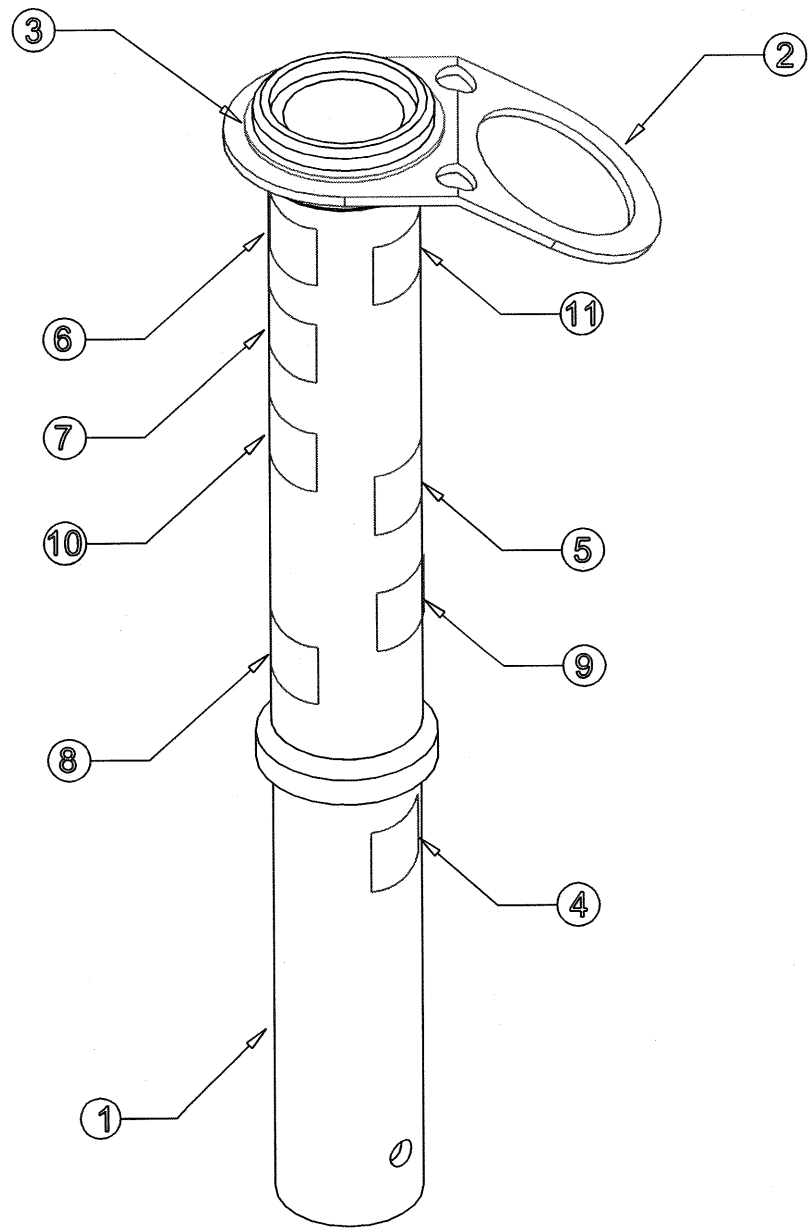
7 REPLACEMENT PARTS

7.1 General

These drawings are to provide you with an easy reference to order replacement labels and parts when required. Please follow each of the drawings to locate the part numbers required to order from MILLER by either referencing the bill of materials on the right hand side of the drawing and then locating the balloon pointing out the replacement part for verification or visa versa.

TOLERANCES
(UNLESS OTHERWISE SPECIFIED)
.X±0.040
.XX±0.020
.XXX±0.010
ANGLES ±1°DEG

METRIC DIMENSIONS
TOLERANCES
(UNLESS OTHERWISE SPECIFIED)
.X ± 0.60
.XX ± 0.30
ANGLES ± 1° DEG



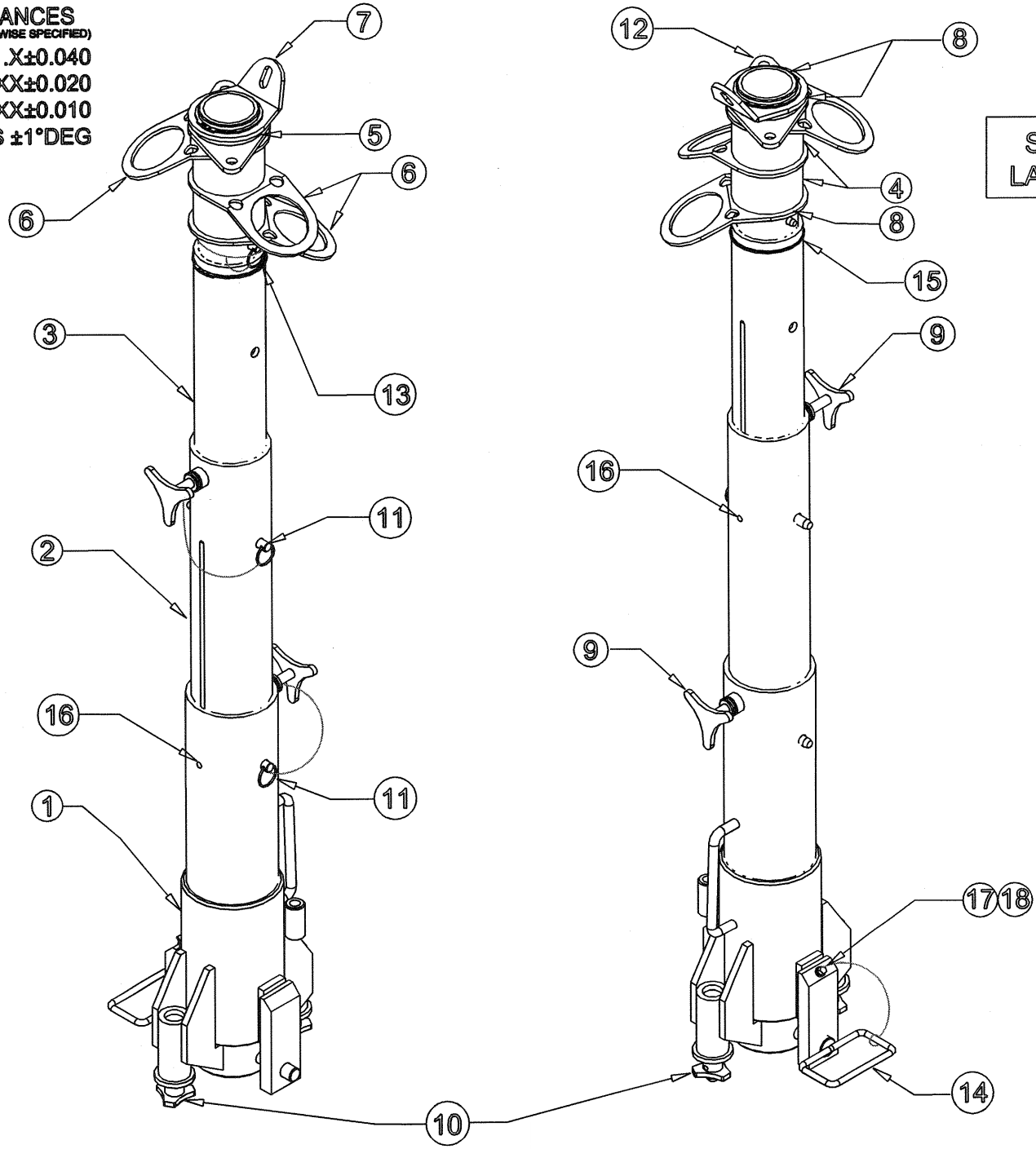
ITEM #	PART #	QTY	DESCRIPTION
11	17435	1	LABEL, MAX 3 PERSONS
10	16970	1	LABEL, WARNING 310 LBS W.L.
9	15570	1	LABEL, READ INSTRUCTIONS
8	12817	1	LABEL, FOIL SERIAL PLATE
7	13818	1	LABEL, 900 LBS MAF
6	16399	1	LABEL, ELECTROCUTION HAZARD
5	15272	1	CE LABEL
4	12998	1	LABEL, DESIGNED BY
3	12387	2	3" EXTERNAL SNAP RING
2	16629	1	SWIVEL TIE-OFF RING
1	16684	1	W/A EXTENSION TUBE

Drawn by: JS	Scale: NTS	Dimensions: INCHES	Date: 060802
Checked by:	Date:	Approved by:	Date:

Project: PORTABLE FALL ARREST SYSTEM	DWG SIZE: A	REV #: 2	SHEET: 1 OF: 1
Description: UPPER EXTENSION ASSEMBLY			DH-AP-2

TOLERANCES
(UNLESS OTHERWISE SPECIFIED)
.X±0.040
.XX±0.020
.XXX±0.010
ANGLES ±1°DEG

METRIC DIMENSIONS
TOLERANCES
(UNLESS OTHERWISE SPECIFIED)
.X ± 0.60
.XX ± 0.30
ANGLES ± 1° DEG



SEE SHEET 2 FOR LABEL APPLICATION

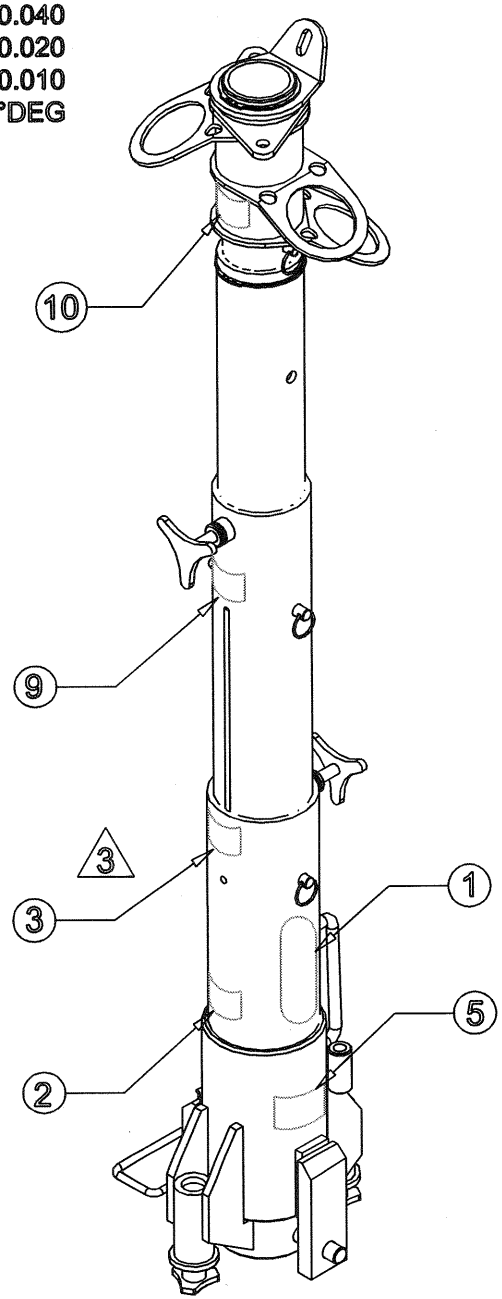
ITEM #	PART #	QTY	DESCRIPTION
18	10047	1	1/4" FLAT WASHER, PLTD
17	10048	1	1/4 x 1/2" TC HWHS, PLTD
16	17103	2	5/16 NC x 5/16 SET SCREW - OVAL PT
15	12844	1	3.5" EXTERNAL SNAP RING
14	17350	1	MOUNTING PIN w/ HANDLE & LANYARD ASSY
13	16879	1	3/8" x 3.0 Q.R. PIN AND LANYARD ASSEMBLY
12	17212	1	H.L.L. ANCHOR POINT
11	16878	2	1/2" x 4.50 Q.R. PIN AND LANYARD ASSEMBLY
10	16797	2	LEVEL ADJUSTMENT SCREW
9	16770	2	TRI-SCREW, SHORT
8	12387	3	3" EXTERNAL SNAP RING
7	16768	1	DAVIT ARM ANCHOR POINT
6	16629	3	SWIVEL TIE-OFF RING
5	16745	1	PVC SPACER, SMALL
4	16722	2	PVC SPACER
3	16752	1	W/A SWIVEL RING EXTENSION POST
2	16766	1	W/A SECONDARY EXTENSION POST
1	16764	1	W/A MOUNTING SLEEVE

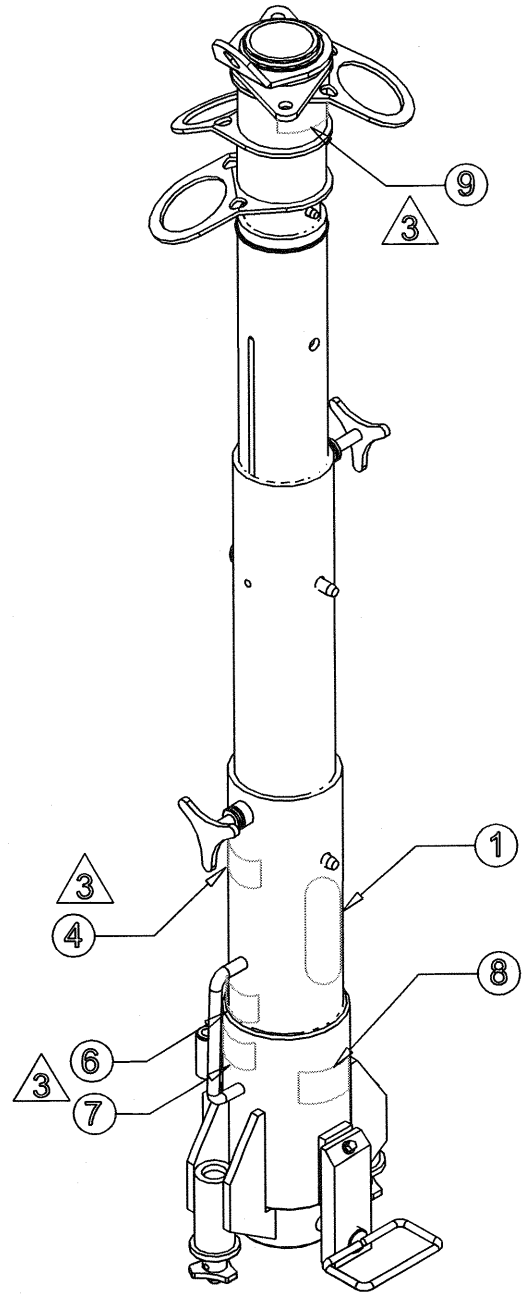
Drawn by: JS	Scale: NTS	Dimensions: INCHES	Date: 290702
Checked by:	Date:	Approved by:	Date:
Project: PORTABLE FALL ARREST SYSTEM		DWG SIZE: A	REV #: 3
Description: PFAS			SHEET: 1 OF: 2

DH-AP-1

TOLERANCES
(UNLESS OTHERWISE SPECIFIED)
.X±0.040
.XX±0.020
.XXX±0.010
ANGLES ±1°DEG

METRIC DIMENSIONS
TOLERANCES
(UNLESS OTHERWISE SPECIFIED)
.X ± 0.60
.XX ± 0.30
ANGLES ± 1° DEG



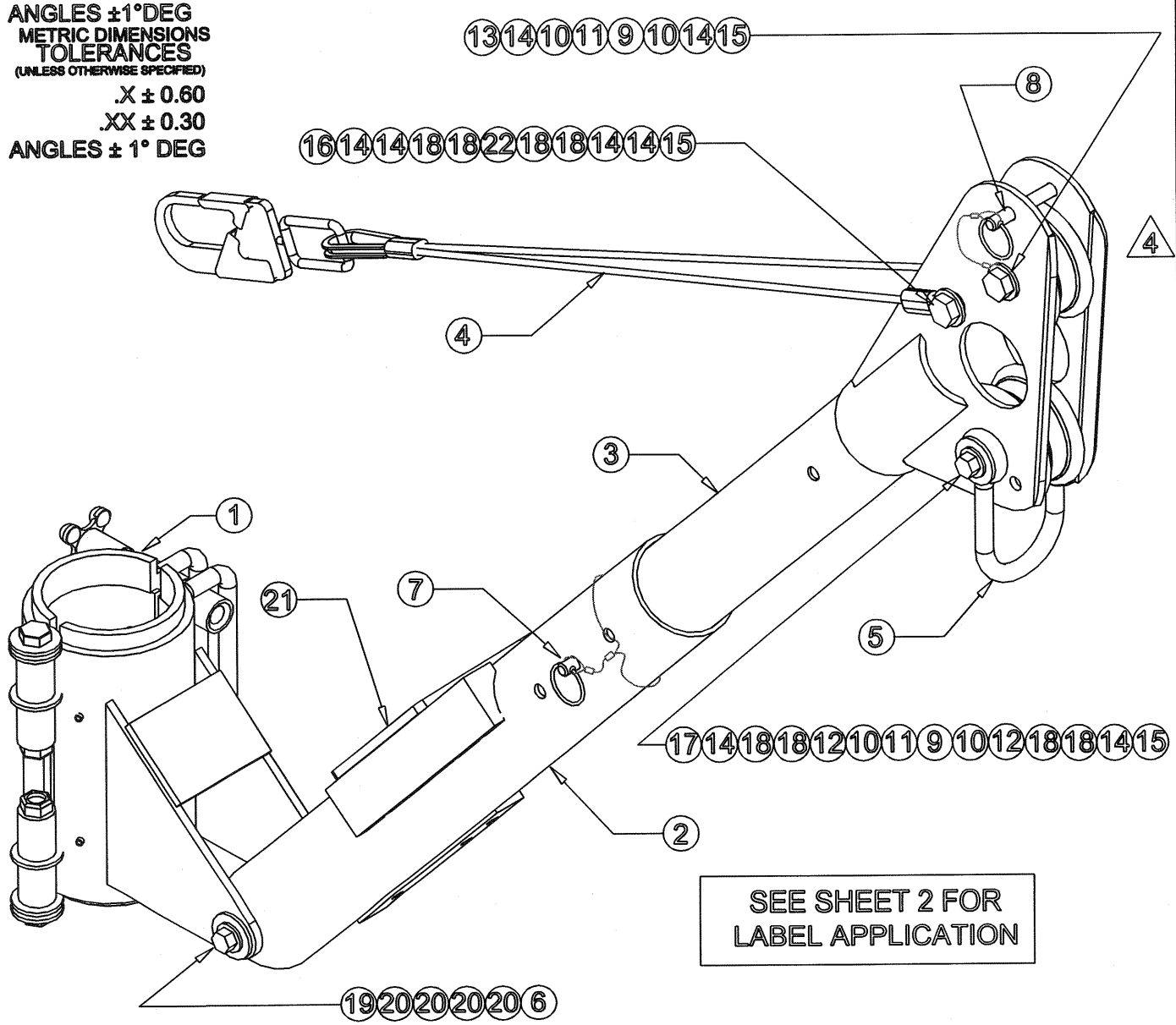


ITEM #	PART #	QTY	DESCRIPTION
10	13818	1	LABEL, MAX LOAD 900 LBS (4KN)
9	17382	1	LABEL, HLL ANCHOR POINT RATING
8	16994	1	LABEL, MUST BE VERTICAL
7	12998	1	LABEL,
6	15570	3	LABEL, READ & UNDERSTAND INSTRUCTIONS
5	16970	1	LABEL, WARNING MAX LOAD 310 Lb
4	15272	1	CE LABEL
3	16399	1	LABEL, ELECTROCUTION HAZARD
2	12817	1	FOIL SERIAL # LABEL
1	16840	2	LABEL,

Drawn by: JS	Scale: NTS	Dimensions: INCHES	Date: 290702
Checked by:	Date:	Approved by:	Date:
Project: PORTABLE FALL ARREST SYSTEM		DWG SIZE: A	REV #: 3
Description: PFAS			SHEET: 2 OF: 2

DH-AP-1

TOLERANCES
(UNLESS OTHERWISE SPECIFIED)
.X±0.040
.XX±0.020
.XXX±0.010
ANGLES ±1°DEG
METRIC DIMENSIONS
TOLERANCES
(UNLESS OTHERWISE SPECIFIED)
.X ± 0.60
.XX ± 0.30
ANGLES ± 1° DEG



SEE SHEET 2 FOR LABEL APPLICATION

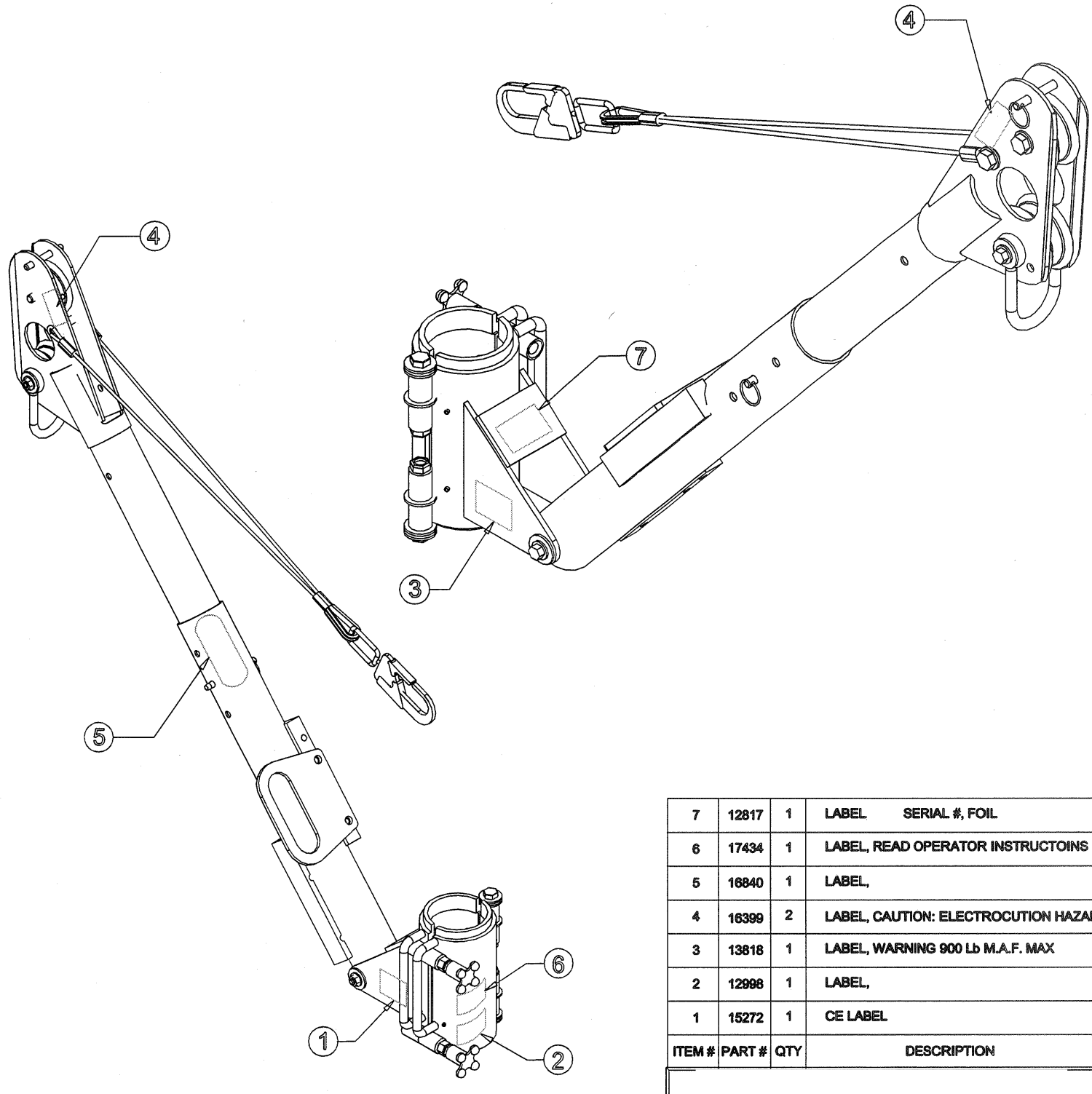
ITEM #	PART #	QTY	DESCRIPTION
22	17393	1	MAST HEAD SPACER, CABLE LOCATION
21	17319	1	CARRYING HANDLE
20	12531	4	1/2" USS FLAT WASHER, PLTD
19	12461	1	1/2 UNC x 5.0" HHCS, GR 5, PLTD
18	10037	8	1/2" SAE FLAT WASHER, PLTD
17	12489	1	3/8 UNC x 3 3/4" HHCS, GR 5, PLTD
16	12490	1	3/8 UNC x 3 1/2 HHCS, GR 5, PLTD
15	10033	3	3/8" UNC NYLON LOCK NUT
14	13343	8	5/16" USS FLAT WASHER, PLTD
13	12493	1	3/8 UNC x 2 1/2" HHCS, GR 5, PLTD
12	15654	2	U-BRACKET SPACER
11	15156	2	MAST HEAD SPACER
10	15260	4	1/4" PULLY SPACER
9	11544	2	3 3/8 x 1/2 x .78 BLACK ACETAL PULLY
8	15112	1	3/8 x 1.8 Q.R. PIN & LANYARD ASSEMBLY
7	16879	1	3/8 x 3" Q.R. PIN & LANYARD ASSEMBLY
6	10036	1	1/2 UNC NYLON LOCK NUT, PLTD
5	15257	1	STAINLESS STEEL U-BRACKET
4	16759	1	DAVIT ARM CABLE ASSEMBLY
3	16761	1	UPPER DAVIT TUBE
2	16662	1	DAVIT ARM RECIEVER TUBE
1	16988	1	DAVIT ARM SLEEVE

Drawn by: JS	Scale: NTS	Dimensions: INCHES	Date: 310702
Checked by:	Date:	Approved by:	Date:
Project: PORTABLE FALL ARREST SYSTEM		DWG SIZE: A	REV #: 4
Description: C/A: DAVIT ARM ASSEMBLY			SHEET: 1 OF: 2

DH-AP-3

TOLERANCES
(UNLESS OTHERWISE SPECIFIED)
.X±0.040
.XX±0.020
.XXX±0.010
ANGLES ±1°DEG

METRIC DIMENSIONS
TOLERANCES
(UNLESS OTHERWISE SPECIFIED)
.X ± 0.60
.XX ± 0.30
ANGLES ± 1° DEG



ITEM #	PART #	QTY	DESCRIPTION
7	12817	1	LABEL SERIAL #, FOIL
6	17434	1	LABEL, READ OPERATOR INSTRUCTOINS
5	16840	1	LABEL,
4	16399	2	LABEL, CAUTION: ELECTROCUTION HAZARD
3	13818	1	LABEL, WARNING 900 Lb M.A.F. MAX
2	12998	1	LABEL,
1	15272	1	CE LABEL

Drawn by: JS	Scale: NTS	Dimensions: INCHES	Date: 310702
Checked by:	Date:	Approved by:	Date:
Project: PORTABLE FALL ARREST SYSTEM		DWG SIZE: A	REV #: 4
Description: C/A: DAVIT ARM ASSEMBLY			SHEET: 2 OF: 2

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